Journal
of the AMERICAN
PHARMACEUTICAL
ASSOCIATION

JUNE
1958

Practical
Pharmacy
Edition

V. 19, #6

Eli Lilly, 1958 Remington Honor Medalist, see page 361

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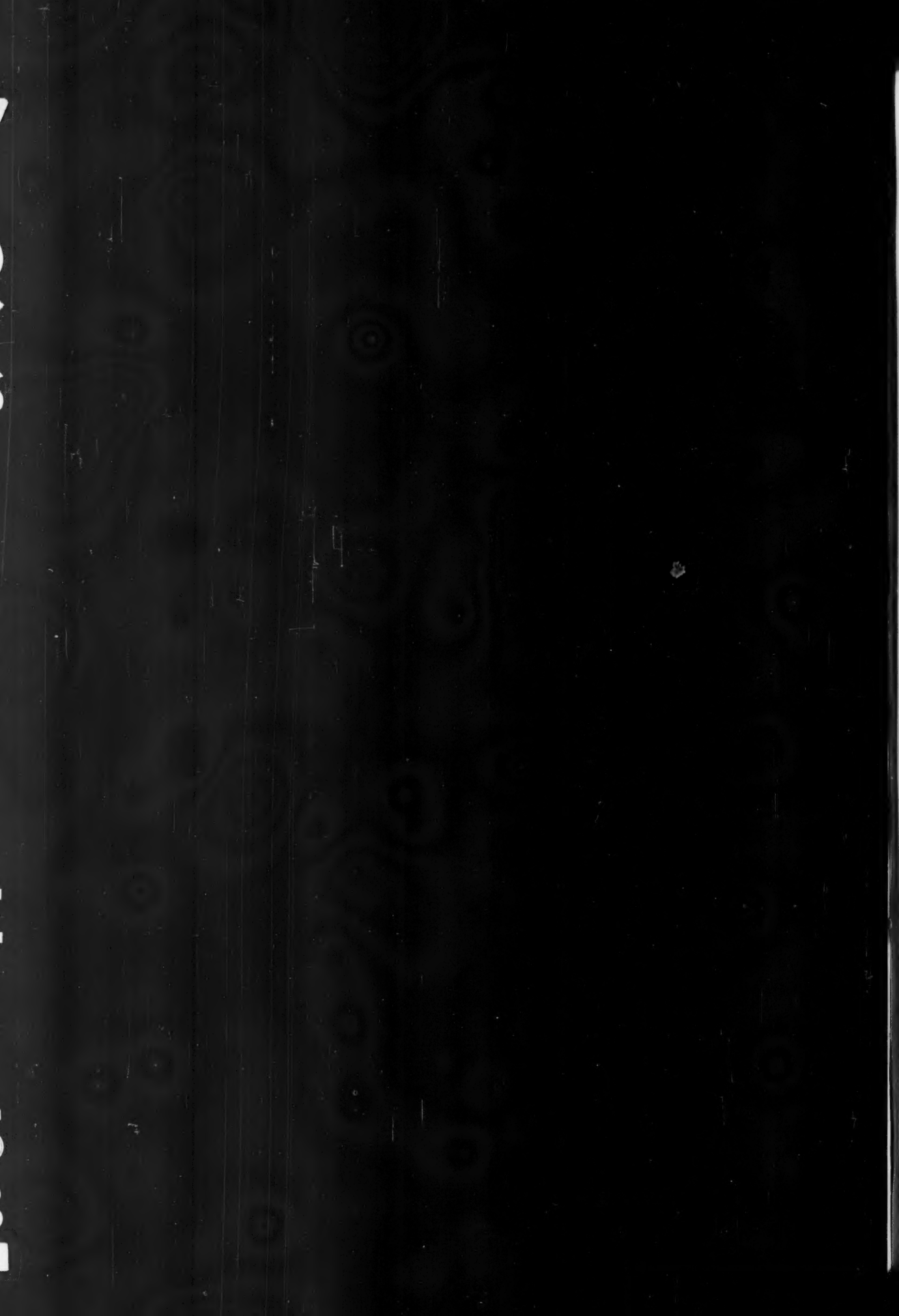

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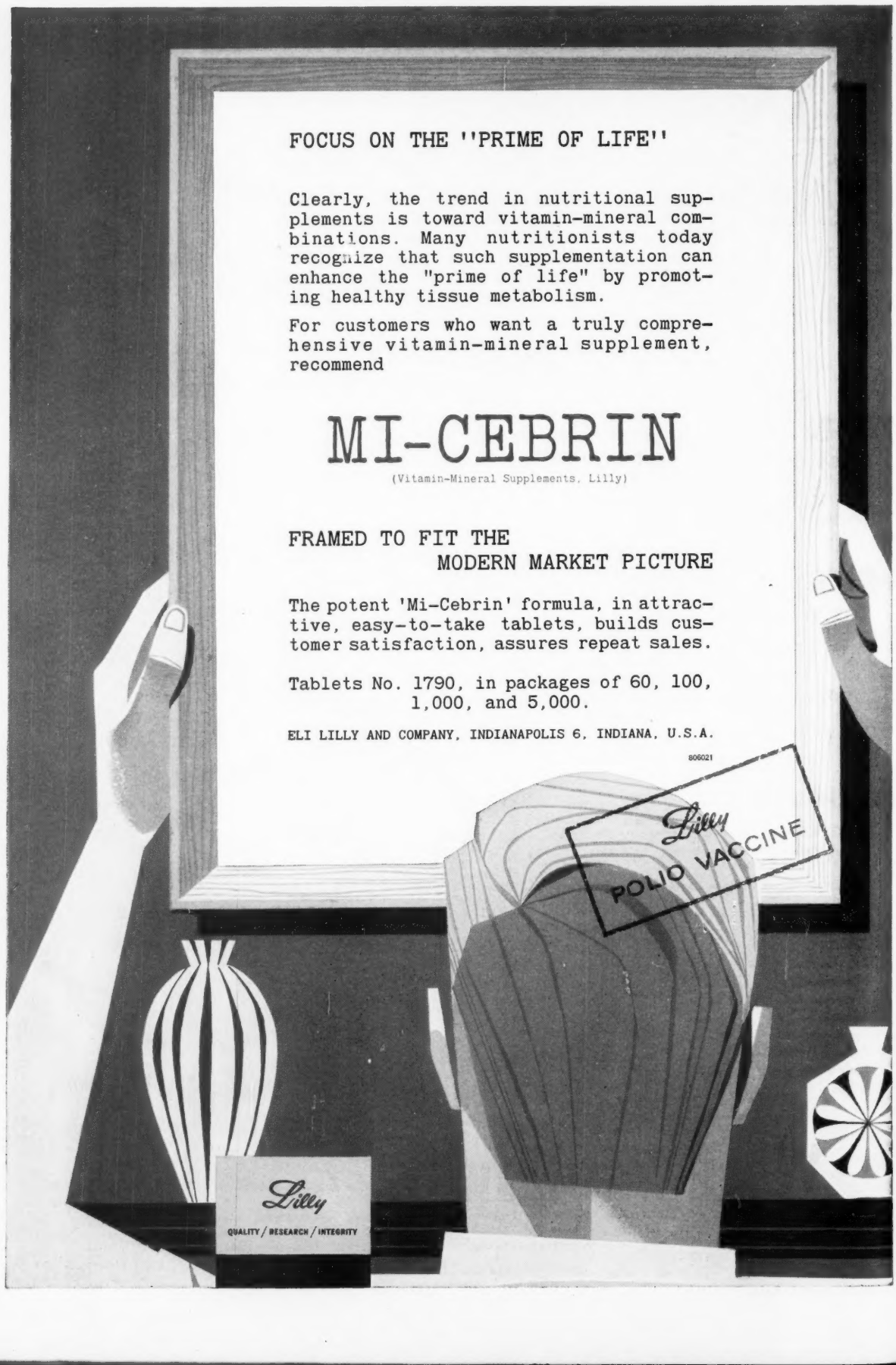

Journal
of the **AMERICAN PHARMACEUTICAL ASSOCIATION**
Practical Pharmacy Edition

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This Journal is the official monthly publication of the AMERICAN PHARMACEUTICAL ASSOCIATION, dedicated to the elevation and unification of the profession of Pharmacy through communication of authoritative scientific, professional, and cultural information. It is devoted to the education of pharmaceutical practitioners, and it functions as the professional voice of Pharmacy, which is directed to all members of the profession of Pharmacy in education, government, industry, and professional practice.

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Washington Views

Nearly 4,000 new pharmacists will find jobs readily in most areas, according to Secretary of Labor James P. Mitchell. However, there will be considerable competition in some cities for desirable positions, and not enough pharmacists with graduate training are available for college teaching and laboratory research.

Leaders of the pharmaceutical industry are greatly worried by the concept of implied warranties, as illustrated by the Cutter Laboratories case wherein a special and unique set of rules applicable only to the drug and food industries resulted in heavy damages being awarded to the plaintiff, in spite of the fact that Cutter was found not guilty of any negligence and had complied to the fullest extent with the regulations and tests governing the production of Salk vaccine. If a trend toward absolute warranty develops, the introduction of new life-saving drugs will be slowed to a trickle, according to these industrialists.

There is a feeling in some quarters, although it is perhaps not properly justified, that the Atomic Energy Commission has not been completely frank and prompt in its release of information concerning the health hazards of radioactive fallout.

All travelers going abroad must receive suitable protection against specified diseases including typhoid, paratyphoid, and tetanus, according to the U.S. Public Health Service. In addition to inoculations against these diseases, visitors to Europe and most countries must have had a recent smallpox vaccination. Visitors to communist countries must receive typhus injections. Those going to Asia should also be inoculated against typhus, cholera, and yellow fever. Visitors to Africa should obtain typhus and yellow fever inoculations. Inquiries should be made well in advance of travel.

"Pharmacological warfare," a new kind of offensive waged by manipulating the minds of men with chemicals or other means, may be used by Russia who leads the world in many aspects of brain research, according to Dr. Leonard Carmichael, Secretary to the Smithsonian Institution, Washington, D.C., who warned that Soviet research on the effects of pharmaceutical products on higher nervous activity was ominous.

The passage of the Harris Bill, H.R. 10527, by the Congress of the United States will provide real assistance to the small independent retail pharmacist and will thereby maintain our free enterprise system, according to recent witnesses supplying testimony at both the state and national level.

Improving the quality of science and mathematics education is even more important than increasing the number of students taking such courses, according to James R. Killian, Jr., Special Assistant to the President For Science and Technology, and a group of prominent educators and scientists.

Last Minute News

Senator Hubert H. Humphrey has introduced a bill, S 3850, to equalize rights in the distribution of identified merchandise, a second bill, S 3851, to prohibit loss-leader sales, and a third bill, S 3852, to prohibit sales at unreasonably low prices when the effect may be to injure competition. Public hearings will be held on June 23, 24, and 25. F. Royce Franzoni, Chairman, APhA Committee on Legislation, recorded APhA endorsement of the Harris Fair Trade bill, H.R. 10527, during recent hearings on that bill.

There are 100 Regular Army spaces available at the present time for Pharmacy Officers. In addition to these spaces, pharmacists are eligible for about 80% of the 100 positions available each year in all areas of the Medical Service Corps. Seniors in pharmacy schools, for the first time, may apply for Regular Army Commissions in the MSC and if registered later may become Pharmacy Officers. Pharmacists applying for direct commissions will no longer be required to serve a preliminary period of active duty before being appointed.

A successor is being sought for Sylvester H. Dretzka, Secretary of the Wisconsin State Board of Pharmacy for 20 years, who will retire at the end of this year. Applications are being received by the Wisconsin State Board, 794 North Jefferson St., Milwaukee 2, Wisc.

Emotional tensions may result in severe damage to teeth and dental tissues and even the jaw joints, according to Dr. Ernest B. Granger, writing in the Journal of the American Dental Association.

The National Health Survey conducted by the Public Health Service reveals that more than 21,000,000 persons in the U.S. have lost all of their teeth. Some 42% of the American people have not been to the dentist for 3 years or more, and only 36% of the people have visited a dentist during the preceding year.

Opening the doors and taking off the window bars of mental institutions has had a healing effect on the minds of patients, according to Dr. Herman B. Snow, director of St. Lawrence State Hospital, Ogdensburg, N.Y. These policies have increased the release rate, especially of patients hospitalized for from 5 to 30 years.

Physicians of Mount Sinai Hospital, New York, disclose that more than $^2/_3$ of the patients admitted to the medical service were found also to have a psychiatric illness. Of these 36% suffered from psychoneurosis, 13.7% from character disorder, and 5.5% from overt or latent schizophrenia.

A new test for syphilis called RPCF (Reiter Protein Complement Fixation) test is more specific than a Wasserman and simpler than the TPI (Treponema Pallidum Immobilization) test, according to Drs. James N. Miller, Ruth A. Boak, and Charles M. Carpenter of UCLA Medical School.

A new and promising anti-tuberculosis drug, kanamycin, which was first discovered in Japan in 1957 by Dr. Hamao Umezawa of Tokyo University, has been studied by Dr. Kenneth Wright of the Onondaga Sanatorium, Syracuse, N.Y. Patients become resistant to the drug in the same manner as with streptomycin. Further studies of the drug, in combination with other drugs, will be undertaken in an attempt to overcome this.

Deaths from infection after burns jumped 75% in the last 10 years in hospitals, according to Dr. Albert G. Clark, of University of California School of Medicine, San Francisco, because of a growing resistance of disease bacteria to antibiotics.

About 15,000,000 persons, including 3,000,000 children have difficulty hearing and many others suffer from some form of deafness, according to Walter C. Laidlaw, President of the American Hearing Society, who has been promoting early detection, which when followed by medical treatment will often clear up the difficulty.

Although multiple sclerosis has been recognized for almost 100 years, an estimated 500,000 Americans, crippled today by this and other closely related diseases, must remain crippled for life because little is known about its cause and cure.

The United States has been sending emergency medical supplies and teams of top-flight epidemiologists to Pakistan to combat smallpox and cholera epidemics. In Eastern Pakistan alone 1,900 cases of smallpox were reported in one week with about 750 deaths and 330 cases of cholera with more than 200 deaths.

Because some plants prefer calcium to strontium and some plants take up less strontium than others, it is possible for man to protect himself to some extent from the dangers of radioactive strontium-90 fallout, which causes bone cancer, by treating his garden with lime and selecting more carefully the plants for food, according to Dr. Eric B. Fowler of Los Alamos, New Mexico.

Of $5,066,831, awarded for 334 research grants by the National Institutes of Health, 60% goes toward supporting research in the neurological diseases and mental health fields.

A team of 10 United States educators headed by U.S. Commissioner of Education, Lawrence G. Derthick, is spending a month surveying education inside the Soviet Union and will return about June 10th.

Only 16 high schools in the United States are now teaching the Russian language.

It is reported that Federal investigations may result from a statement by Benjamin Schultz, President of the New Jersey Pharmaceutical Association, who said that: "Some nonpharmacy outlets now have illegal possession of narcotic drugs under their counters, and a full-scale investigation of thousands of these outlets would shock state authorities on the extent of violations of illegal possession narcotic laws, which imperil the health and safety of the state's 5,000,000 residents, especially school children."

Recent studies indicate that polio vaccine given simultaneously with other vaccines for infants provides safe, effective immunity, according to Dr. Thomas M. Rivers, National Foundation for Infantile Paralysis.

Out of 10 families who have health insurance, 7 have used it at some time during the period their policies were in force.

Preliminary data will be available about July 1, through the current U.S. Public Health Service survey on nationally available supplies of pharmaceutical items essential to survival in the event of nuclear attack or other national emergency. All production and distribution segments of Pharmacy are cooperating.

The annual dental bill of $1,500,000,000 for the 40% of America's 173,000,000 persons who avail themselves of dental service, is 200 times the amount spent for dental research.

News and Notes

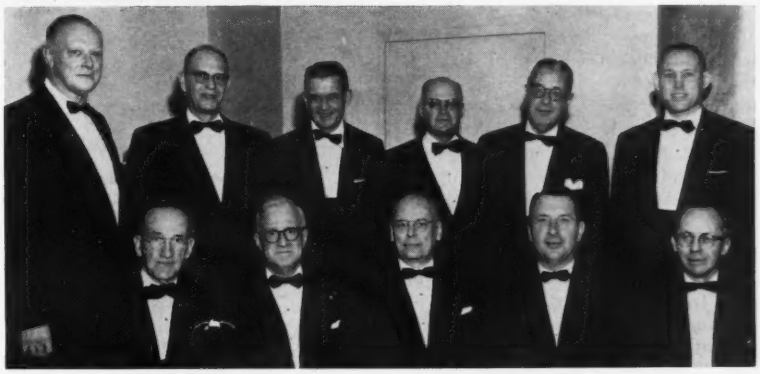
Associations

American Pharmaceutical Association Section on Practical Pharmacy, at the recent Los Angeles Convention, elected *Dr. Samuel W. Goldstein* as its Delegate to the House of Delegates for a 3-year period. This action was necessitated by the recent death of *Professor Leslie M. Ohmart* who was serving as the Delegate from the Section.

Delta Sigma Theta—Alpha Chapter, Brooklyn College of Pharmacy, has elected officers for 1958–1959 as follows: *Joseph Nizzari*, Chancellor; *Donald Bernstein*, Executive Vice Chancellor; *Irwin Natter*, Vice Chancellor; *Alan Maibruch*, Treasurer; and *Philip Freedman*, Scribe.

National Association of Retail Druggists—The Wilmington Chapter of the Women's Organization has been selected to administer one of seven scholarships recently established by *Mr. J. Mahlon Buck*, President of Smith, Kline and French, Inc., Wholesale Druggists of Wilmington, Philadelphia, and Trenton. The scholarships are intended to encourage young men and women to choose retail pharmacy as a career. The annual stipend valued at $500 is to alternate between the Philadelphia College of Pharmacy and Science and the Temple University School of Pharmacy, beginning in the fall term of 1958. Applicants, who must be residents of Delaware, will be chosen on the basis of financial need, scholastic achievement, and leadership.

Alpha Phi Chapter, Butler University College of Pharmacy, was the recipient of the National Rho Chi Chapter Award at the 34th Annual Rho Chi Society Convention in Los Angeles. Pictured (l to r) are: Professor Dale W. Doerr, Alpha Phi Chapter Delegate; Dr. Milton L. Neuroth, College of Pharmacy, Medical College of Virginia, Chairman of the Award Committee; and Dean Roy A. Bowers, College of Pharmacy, Rutgers University, Rho Chi President.



PHILADELPHIA DRUG EXCHANGE honors its Past Presidents at a dinner meeting. Shown (front row, l to r) are R. G. Anderson, formerly Branch Manager, Chemical Division-Merck & Co.; A. B. Collins, formerly President, National Drug Co.; Paul S. Pittenger, formerly Vice President, Sharp & Dohme; E. F. Schaefer, General Branch Manager, Owens-Illinois Glass; and J. Mervin Rosenberger, formerly Senior Vice President, SK&F, and present Secretary of the Exchange; (standing, l to r) are Carl K. Raiser, Director of Distribution, SK&F Laboratories, and Vice President of the Exchange; Richard L. Durst, President, S. F. Durst & Co.; Walter P. Miller, Jr., President of Walter P. Miller Co.; Malcolm Cox, President, Summers Laboratories; J. Mahlon Buck, President, SK&F; and Robert L. McNeil, Jr., Chairman of the Board, McNeil Laboratories, and President of the Exchange, one of the oldest trade organizations.

National Health Council President, *Dr. Norvin C. Kiefer*, has announced the appointment of *Dr. James H. Sterner*, Medical Director for Eastman Kodak Company, as Chairman of the 1959 National Health Forum which will be held in Chicago during the week of March 16. The meeting will direct national attention to the health of America's workers who comprise over one-third of the population, the health of their dependents, and that of the communities in which they live. A consultant in industrial health for the U.S. Atomic Energy Commission, Dr. Sterner was selected in 1946 as medical consultant for atomic bomb tests at Bikini Atoll. He is the author of numerous publications and an Associate Professor of Medicine at the University of Rochester.

Nebraska Pharmaceutical Association—*Robert Hildebrand*, York pharmacist, is the new President of the Association. A graduate of the University of Nebraska and former Vice President of the NPA, Mr. Hildebrand is a member of the APhA.

New Jersey Pharmaceutical Association—*George S. Squibb*, great-grandson of the founder of E. R. Squibb & Sons, will be the principal speaker on June 18, at the 88th annual convention of the Association in Atlantic City. The occasion has been designated as "Squibb Centennial Day," and will be a highlight of the meeting which will be held from June 15 through 19.

Proprietary Association held its 77th Annual Meeting, May 12 through 14, at the Greenbrier Hotel, White Sulphur Springs, West Virginia. Among the Speakers were: *Dr. John P. Hagen*, Director, Project Vanguard, U.S. Naval Research Laboratories; *William McChesney Martin*, Chairman, Board of Governors, Federal Reserve Board; and *C. D. Jackson*, Vice President of *Time* Magazine.

Colleges

Columbia University—*Dr. Leonard A. Scheele*, President of Warner-Chilcott Laboratories and former U.S. Surgeon General, spoke at the opening of the new Aerosol Research Labo-

Continued on page 336

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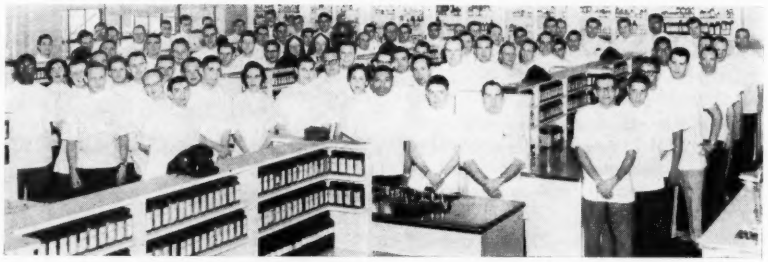
News and Notes Continued from page 335

ratory at the Columbia College of Pharmacy on April 30. The laboratory, made possible by a grant from Aerosol Techniques, Inc. of Bridgeport, Connecticut, is under the direction of *Professor Joseph L. Kanig*, and will be utilized as a part of the graduate program for research projects involving the development of pharmaceutical pressurized dosage forms.

Howard University—On May 2, *Dr. Eric W. Martin*, Editor of THIS JOURNAL, was guest speaker at the annual banquet in honor of the graduating class of Howard University College of Pharmacy. Deans and other faculty members from law, dental, medical, and other schools in Washington, D.C. attended.

New England College of Pharmacy—U.S. *Senator John F. Kennedy* of Massachusetts was principal speaker at commencement exercises held Saturday, June 7, at the New England Mutual Hall in Boston. An honorary degree of Doctor of Science was conferred upon Senator Kennedy by the College, which this year was accredited by the American Council on Pharmaceutical Education as a Class A college.

Ohio State University—*Associate Professor Jack L. Beal* of the Pharmacy faculty has been awarded a National Science Foundation Faculty Fellowship for study and research during 1958–59. He has specialized in chemical and botanical studies of plant drugs and factors affecting their quality and is in charge of a medicinal plant garden at the Ohio State College of Pharmacy. Under the NSF Fellowship he plans to pursue a program of independent study in plant biochemistry, plant physiology, and experimental research methods at the University of Wisconsin during the coming academic year, with the summer of 1959 to be spent at Purdue.



Once again 100% APhA membership for St. Louis College of Pharmacy Graduating Class for 1958. Congratulations and welcome!

St. John's University—Forty chemists and pharmacists recently completed a course in emulsion theories and technology at the second in a series of seminars sponsored by the College of Pharmacy Alumni Association. The course, consisting of 6 two-hour lectures, was conducted by *Dr. Martin Barr* of the Philadelphia College of Pharmacy and Science.

The College of Pharmacy and the Queens County Pharmaceutical Society cooperated with Creedmoor State Hospital in observing Mental Health Week (April 27–May 3) by sponsoring a public health forum on May 1. The topics discussed at the forum included diagnosis, care, and treatment of mental health problems. *Dr. Andrew J. Bartilucci*, Dean of the College of Pharmacy, was one of the program's directors.

University of Kansas—A grant of $20,186 has been awarded by the Office of Naval Research to *Dr. D. G. Wenzel*, Professor of Pharmacology in the School of Pharmacy, for research on the project, "The Determination of the Effects of Common Centrally-Acting Drugs on Human Performance, with Particular Regard to the Functions Used in Guiding Moving Objects, Such as Driving." The duration of the project is 3 years, and the associate investigator will be *Dr. R. L. Hermes*.

Government

Atomic Energy Commission—The appointment of *Dr. John Harry Williams*, University of Minnesota physicist, as Director of the Research Division of the U.S. Atomic Energy Commission, was announced by *K. E. Fields*, AEC General Manager. The appointment became effective on April 17. Dr. Williams succeeds *Dr. Thomas H. Johnson*, who resigned on October 1, 1957. to manage the Research Division of the Raytheon Manufacturing Company, Waltham, Massachusetts.

President's Committee on Employment of the Physically Handicapped—*President Eisenhower* joined with delegates from all States and Territories in opening ceremonies of the 2-day Annual Meeting of the Committee on May 8. He presented the President's Trophy to the "Handicapped American of the Year," *Mrs. Louise Lake* of Salt Lake City, Utah. A victim of polio, Mrs. Lake is the first woman to win the award.

Public Health Service—*Dr. Bernard B. Brodie*, Chief, Laboratory of Chemical Pharmacology, National Heart Institute, National Institutes of Health, was awarded the Distinguished Service Award of the Department of Health, Education, and Welfare by Secretary *Marion B. Folsom* in ceremonies held April 18. Dr. Brodie was cited for his development of a new field in medicine, Chemical Pharmacology.

Key officials appointed to the newly established Division of Radiological Health are: *Dr. Francis J. Weber*, Chief; *James G. Terrill, Jr.*, Assistant Chief; *Dr. Donald R. Chadwick*, Chief of the Program Operations Branch; *Ernest C. Anderson*, Chief of the Special Projects Branch; and *Dr. Arthur H. Wolff*, Chief of the Training Branch. The Division will

Continued on page 338

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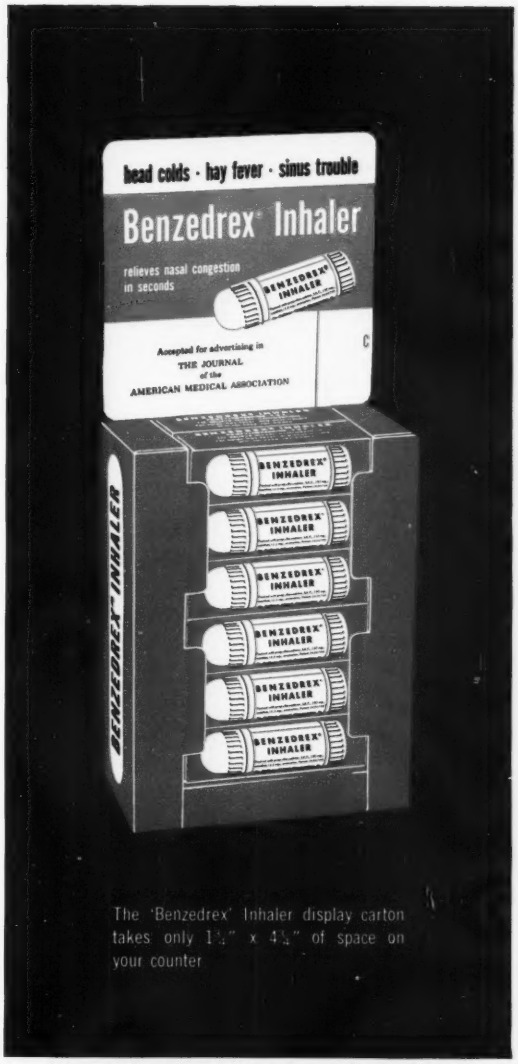
head colds · hay fever · sinus trouble
Benzedrex® Inhaler
relieves nasal congestion in seconds
BENZEDREX® INHALER
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BENZEDREX® INHALER

The 'Benzedrex' Inhaler display carton takes only 1¾" x 4¾" of space on your counter

Your customers rely on you for sound advice on many products. You can recommend 'Benzedrex' to them with confidence; it's quick, effective and safe. In a matter of seconds 'Benzedrex' opens ducts and ostia that liquids can't reach—and it causes no excitation or wakefulness.

To get the attractive display carton, order from your wholesaler by the dozen. It takes so little counter space!

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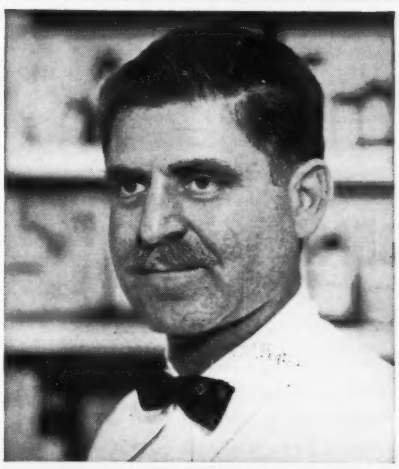

"I now know that it pays to display the 'Benzedrex' Inhaler carton. 'Benzedrex' is an all-year business."

Joseph Behar
Elm Chemists
9001 31st Avenue
Jackson Heights, N.Y.

Smith Kline & French Laboratories, Philadelphia

News and Notes Continued from page 336

be concerned with research, training programs, surveillance, and public health practice in the radiological health field.

The PHS has made a grant of $417,939 to the Albert Einstein College of Medicine of Yeshiva University, New York City, for research on the medical and biological aspects of aging.

Hospitals

University of California Hospital at Los Angeles offers an internship program in hospital pharmacy in cooperation with the University of Southern California School of Pharmacy. The program leads to a degree of Master of Science in Hospital Pharmacy and takes from 1 to 2 years to complete the requirements. There will be an opening for one intern beginning September 1, 1958. The intern is rotated through all phases of the Pharmaceutical Service, including Inpatient, Outpatient, Manufacturing Sterile Solutions, and Pharmacy Administration. There is also opportunity to attend conferences, lectures, and seminars with medical and pharmacy personnel. The stipend, including allowances, is $185 monthly. For further information write *Mr. Jack S. Heard,* Chief Pharmacist, University of California Hospital, Los Angeles 24, California.

University of Pittsburgh in cooperation with the Veterans Administration has established a graduate training program leading to the degree of master of science in hospital pharmacy. The new program will begin in the fall of 1958. Under it, a graduate pharmacist will continue advanced study in the Pitt School of Pharmacy while serving as resident at the Oakland Veterans Administration Hospital. The resident will be paid by the Veterans Administration but must bear the cost of his academic work at the University.

Industry

American Cyanamid Company will build a multi-million dollar anthraquinone manufacturing facility at its Bound Brook, N.J. plant, using a completely new process developed in the company's research laboratories, it was announced by *Dr. W. G. Malcolm,* President. The new unit, which will be operated by Cyanamid's Organic Chemicals Division, will replace and expand existing anthraquinone facilities, and with its completion Cyanamid will become the only commercial producer of napthoquinone in this country.

Burroughs Wellcome & Company—*Howard B. Fonda,* Senior Vice President, is retiring after 37 years. Beginning his career in the firm's Sales Department, he has been active in its Experimental Research Laboratories and its Production Department as well. He is President of the American Foundation for Pharmaceutical Education and a Past President of the APMA.

Dodge & Olcott has renamed its Hawthorne, N.J. plant the Dry Materials Division. Previously devoted to the manufacture of dry soluble flavors and seasonings, the plant has been enlarged to include the processing of spray dried flavors, seasonings and perfumes. Plant Director is *William F. Ammon;* Assistant Director, *Bryan J. McCabe.*

Eaton Laboratories—*Raymond L. Scott* has joined the Scientific Information Division as Chief of the Documentation Section, *Dr. William B. Stillman,* former Administrative Research Coordinator, announced. Formerly connected with Wyeth, Mr. Scott will serve under *Dr. Rolland J. Main,* Director of the Scientific Information Division. A graduate of Temple University with an M.S. degree from Drexel, he is a member of APhA.

Robert A. Hardt (l), Executive Vice President of Hoffmann-LaRoche, receives on behalf of his company a Department of Defense Reserve Award from Major General Raymond E. Bell (r), Commanding General, II U.S. Army Corps (Reserve). Roche was cited by the Department of Defense for its "outstanding cooperation with the Reserve activities of the Armed Forces."

Garfield Associates—*Current Contents of Pharmaco-Medical Publications,* a new weekly subscription service, provides reproductions in booklet form of the contents pages of about 250 journals reporting information relating to the discovery, development, testing, and use of drugs and chemicals. The journals surveyed include world-wide publications in the fields of chemistry, experimental and clinical medicine, general science, pharmacy and veterinary medicine. *Current Contents,* a service of Eugene Garfield Associates, 1523 Spring Garden St., Philadelphia, Pa., provides a compact, rapid briefing on current publications for personnel of the pharmaceutical industry.

Kasco Laboratories Inc., a new corporation, has been established and has begun production of ointments, creams, lotions, and liquid pharmaceutical preparations on a custom basis. Emphasis will be on specialties. Offices, plant, and laboratories are located at 442 Peninsula Boulevard, Hempstead, N.Y. Officers are *Stanley Shaffer,* President, and *Kurt S. Kohorn,* Secretary-Treasurer. The company will publish regularly their Kasco News Briefs with suggestions for new products.

Lederle Laboratories has made a $5000 grant to the Division of Clinical Pharmacology, Johns Hopkins

Continued on page 340

SABENA BELGIAN World AIRLINES

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September 6–28

APhA Members and Friends, let **SABENA** arrange your *all-expense* trip to the *International Pharmaceutical Federation* at 1958's World's Fair site, Brussels. Tour includes England, France, Italy. *Only* $1080 (Lourdes $80 extra). Reservations, limited, so write *at once* for complete information to: Dept. B, APhA, 2215 Constitution Ave., N.W., Washington 7, D.C.

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 Continued from page 338

University Hospital, for the evaluation of anti-cancer drugs and compounds affecting the central nervous system. *Dr. Benjamin Carey*, Medical Director of Lederle, sent word of the award to *Dr. Louis Lasagna*, under whose direction the study is to be conducted. Dr. Lasagna stated that the project will fall into two main categories: the evaluation of drugs as sedatives, hypnotics, and tranquilizers; and the testing of drugs for cancer chemotherapy.

Eli Lilly and Company—*Thomas C. Hasbrook*, Chief of Lilly's Employee Communications Department, has been appointed to the President's Committee on Employment of the Physically Handicapped. An employee of Lilly since 1942, Mr. Hasbrook was blinded by an exploding land mine while serving as a Lieutenant with the U.S. Marine Corps in 1944. A Director and Past President of the Blinded Veterans Association, and a Director of the National Society for the Prevention of Blindness, he has served the Indiana General Assembly as both a Representative (1950–1954) and as a Senator (1955–1958).

Malmstrom Chemical Corporation of Newark, N.J. has announced a research grant to the School of Pharmacy of the University of Wisconsin, for a study of the possible interaction between lanolin derivatives and the skin. The research program, under the direct supervision of Professor *Dale E. Wurster*, will cover a 1-year period.

Merck & Company—The Board of Directors has elected *Dr. Karl H. Beyer, Jr.* and *Dr. Robert G. Denkewalter* as Administrative Vice Presidents of Merck Sharp & Dohme Research Laboratories. In the newly created posts, Dr. Beyer and Dr. Denkewalter will share over-all administrative responsibility, under Research Laboratories President *Dr. Max Tishler*, for the organization's research programs and its staff of more than 1,000 persons. Dr. Tishler announced also the appointment of *Dr. Karl Pfister, III*, to Executive Director for Developmental Research, succeeding Dr. Denkewalter, and the appointment of *Dr. Harry J. Robinson* to Executive Director for Biological Research.

Norwich Pharmacal Company—*Dr. William B. Stillman* has been elected Vice President in charge of Research, Norwich President *George W. Bengert* announced. Dr. Stillman has been associated with Norwich since 1939 and is one of the discoverers of the antimicrobial characteristics of the company's group of nitrofuran chemicals. A former Director of Research for the company, Dr. Stillman has been Administrative Research Coordinator in charge of the Scientific Department since January 1957.

Ortho Pharmaceutical Corporation has announced the appointment of *Dr. William J. Haines* as Vice President and Director of Research and as Vice President and Director of the Ortho Research Foundation.

Parke, Davis—*Dr. Harry E. Carnes*, physician and member of the firm's clinical investigation staff for the past 10 years, has been appointed director of medical correspondence and editor of *Therapeutic Notes*, which is published monthly in 5 languages and 7 editions.

Leo S. Flanedy, Minneapolis Branch Manager since 1934, has retired after 36 years' service with Parke, Davis.

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He is succeeded by *George W. Smith*, a graduate of the University of Cincinnati in 1925 and a registered pharmacist.

W. H. Ramsey, Director of Eastern Hemisphere Operations, announced the appointment of *Anthony Van Zwaren* as Regional Manager of the Tehran, Iran sales office.

Appointment of *Miss Evelyn Barron*, a native of Scotland, to the research staff of Parke, Davis has been announced by *Dr. A. C. Bratton, Jr.*, Director of Pharmacological Research. A graduate of Glasgow University in 1955, Miss Barron has been a retail pharmacy manager in Glasgow and a prescription pharmacist in Windsor, Ontario. She received her Pharmaceutical Chemist diploma from the Royal College of Science and Technology in Scotland.

Schering Corporation—The recently completed "Careers at Schering" brochure is being used at the present time for recruitment of college students throughout the U.S. The booklet was prepared under the direction of Schering's Personnel Department. Personnel Director *John Byrne* says, "We followed the philosophy that one picture is worth 1,000 words. The purpose of the booklet is to interest college men and women in our company and to give them some idea of the talents and abilities we need to effectively operate in our field."

Smith Kline & French Laboratories has created two new positions in its Distribution Department to broaden the company's relations with wholesale distributors and national and state pharmaceutical associations, *Carl K. Raiser*, Director of Distribution, announced. *Robert J. Bolger* has been appointed Manager of Retail Relations to develop liaison between S K & F and pharmacists and their organizations. *Thomas E. Kennedy* has been appointed Manager of Trade Relations to insure the efficient and economical distribution of SKF products to wholesalers and retail pharmacists. Both have been with the company for several years.

E. R. Squibb & Sons was elected to membership in The Hundred Year Association of New York on April 23. A certificate of membership was presented to *John C. Leppart*, Chief Executive Officer of the firm and Senior Vice President of Squibb's parent organization, Olin Mathieson Chemical Corporation, by *George O. Nodyne*, President of the Association. In his presentation remarks Mr. Nodyne said, "Few services to mankind demand greater experience and trust than the services of the pharmaceutical manufacturer. In the performance of these services during the past 100 years, Squibb has developed a dedicated tradition which has brought honor to itself, to the industry it is a vital part of and to the city and citizens of New York."

The Squibb Institute for Medical Research announces the appointment of *Dr. Joseph F. Gardocki* as a research associate in the Division of Pharmacology.

Winthrop Laboratories—*Elizabeth LeMay* has been appointed Editor of medical publications, replacing *Dorothy Stiebling* who has retired, it was announced by *Dr. E. J. Foley*, Vice President and Medical Director. *Susan E. Keller* has been appointed Assistant Editor. Both were on the editorial staff of MD Publications.

International

Fifth International Congress of Internal Medicine, meeting in Philadelphia on April 25, honored *Dr. Haqvin Malmros* of Sweden and *Professor R. B. Hunter* of Scotland with Medical Achievement Travel Awards. The Award program, sponsored by The Purdue Frederick Company, enables winners to attend medical meetings of their choice here and in Europe to "further the international exchange of medical ideas and information on a physician-to-physician basis." Dr. Malmros is Director of the University of Lund Department of Medicine. Dr. Hunter is a Professor in the Department of Pharmacology and Therapeutics at Queens College, Dundee, Scotland.

APhA President Louis Fischl (l) congratulates new NARD President Angus H. Taylor (r) at the Hawaii Pharmaceutical Association Second Annual Convention.

New South Wales—Drug Houses of Australia Ltd., through its subsidiary, D.H.A. (Laboratories) Pty. Ltd., has opened an additional manufacturing unit in Rosebery, New South Wales covering the preparation and filling of soft gelatin capsules. Drug Houses of Australia has contracted with American Cyanamid Company to manufacture a number of Lederle products in Australia, and under this agreement the new plant was designed by D.H.A. technicians and chemical engineers in collaboration with Lederle experts.

Retailing

E. R. Squibb & Sons presented a special prescription award plaque to *Charles R. Seward*, owner of Webb & Seward, Inc., Pasadena, California, in recognition of the two millionth prescription dispensed by the pharmacy. Mr. Seward received the award from Squibb General Manager *J. J. Toohy* at the annual meeting of the Squibb Plan Advisory Council in New York. At the end of 1958, Mr. Seward is retiring from active association after 21 years of membership in the Council.

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Our gift mortar and pestle for display purposes scored such a hit last year that we are now offering a companion piece —this beautiful new Ceramic Graduate!

Add this striking, gold-decorated display Graduate to your collection of pharmacy symbols.

Because it was so popular, we are also repeating our FREE offer on the Mortar and Pestle.

Both professional items . . . used singly or in pairs . . . are perfect for store display, gifts, or in the home. The Mortar and Pestle is ideal as a planter; the Graduate makes a fine matching vase.

Your choice of *one* Professional Symbol, free of extra cost, with *every* 10 cases of Owens-Illinois Prescription Vials and/or Dry Rx Squares ordered.

Ask your Owens-Illinois wholesaler salesman for complete details. Act now . . . this special offer begins June 2, *ends* June 30. These lovely, useful gifts are available during June, 1958 *only*.

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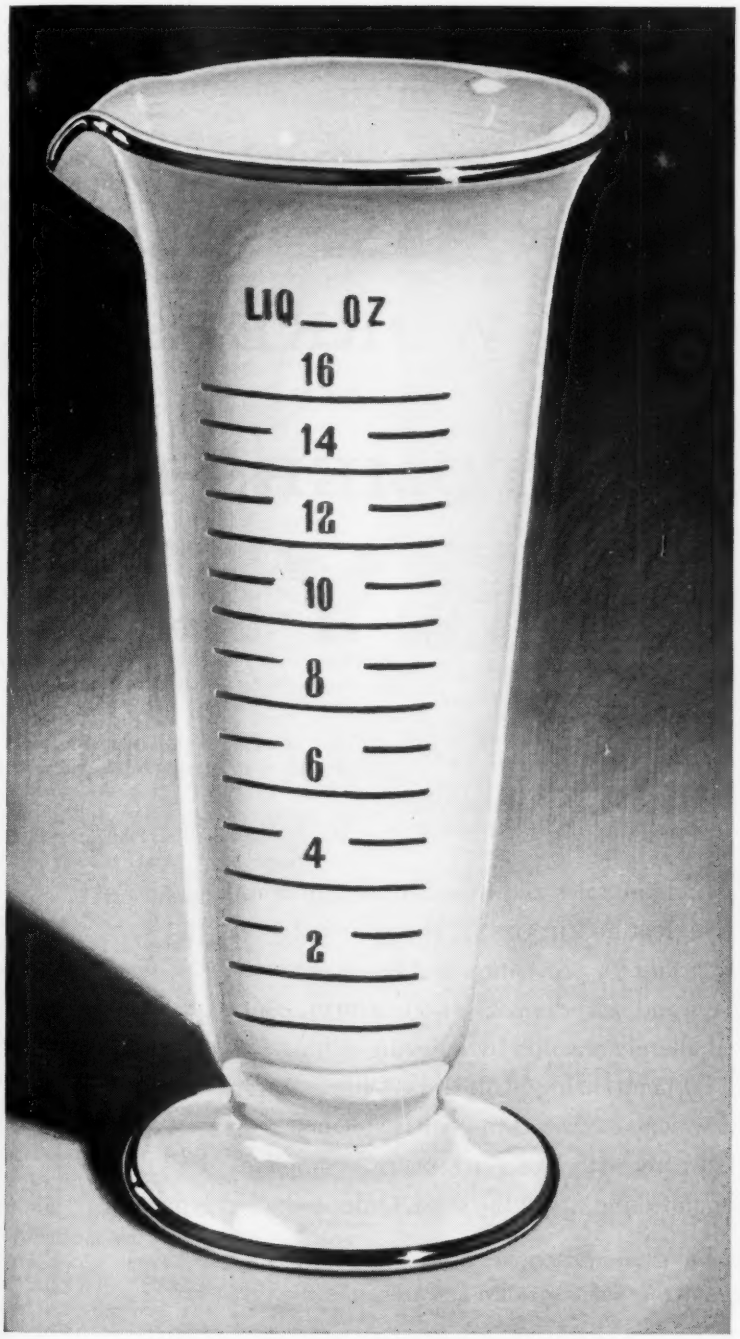

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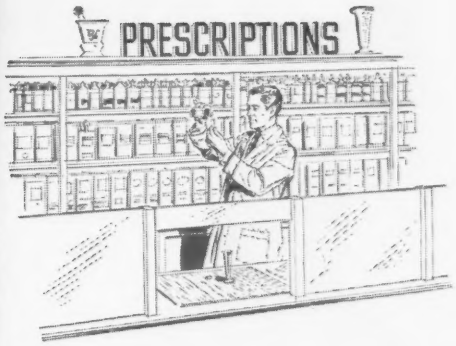

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Branch News

Local Branches

Fresno-Madera Branch—Prescription prices in Fresno County, California, were considered at the March meeting. *Dean Carter* was appointed Chairman of the next Pharmacy Week. At the April meeting *Fred Stemm*, State narcotic agent, spoke on "Narcotic Enforcement," the Federal Fair Trade bill H.R. 10527 was a topic for discussion, and *George A. Sargente*, President of the California Pharmaceutical Association, talked on the unity and accomplishment of the Association.

Indianapolis Branch—The 1958–59 elected officers are *John M. Woodside, Jr.*, President; *Joseph E. McSoley*, President-elect; *Dr. Lawrence C. Weaver*, Vice President; and *Frank Hood, Jr.*, Secretary-Treasurer. *Dr. Edward Rowe*, Delegate, talked on the 1958 APhA Convention, and reports from APhA Sections events were made by *Robert Anderson, Dr. Karl Kaufman, Norman Reeves*, and *Henry Heine*.

New Orleans Branch—At the May 8 meeting, 1959 officers were elected, there was a report on the 1958 APhA Convention in Los Angeles from attending representatives, and a movie, "The Valiant Heart," was shown.

New York Branch—At a joint meeting with student branches of Rutgers, St. John's, Fordham and Brooklyn Colleges of Pharmacy, members heard speakers *Daniel M. Micicucci*, Sales Manager of Charles Pfizer & Co.; *Robert C. Bogash*, Director of Pharmacy Service in Lennox Hill Hospital; and *Dr. Fred Lascoff*, retail pharmacist; with question and answer period following. *Alfred J. White, Jr.*, President of Fordham University School of Pharmacy Student Branch, was guest chairman.

Northwestern Ohio—*Dr. Joseph Judis* spoke on "Elements of Radiological Public Health" at a recent joint meeting with the University of Toledo Student Branch.

Philadelphia Branch—At the April meeting, 9 new members were voted into membership, bringing up the total to 104 new members accepted into the organization since September 1957. Delegates *Dean Sprowls* and *Dean Tice* were appointed, with their alternates *Dr. Blythe* and *Dr. Macek*, to attend the 1959 APhA Convention. *Dr. Stanley P. Kramer*, Research Association, Dept. of Surgery, Sinai Hospital of Baltimore and Johns Hopkins University Medical School, addressed the meeting on "Approaches to Tumor Chemotherapy," reviewing progress and modern agents being used in the fight against cancer.

STUDENT SECTION OFFICERS ELECTED at APhA 1958 Los Angeles Convention. Seated: George C. Fuller, Vice Pres. (Wayne State Univ.); Joanne O'Brien, Sec.-Tres. (St. Louis Coll. of Pharm.); and Carl Vitalie, Pres. (Univ. of Southern Calif.). Standing: Emanuel Newmark, Alternate (Rutgers Univ.); Don Novotny, Alternate (Idaho State Coll.); Bart Quirinale, Delegate to House of Del. (Mass. Co. of Pharm.); and L. V. Grant, Alternate (Texas Southern Univ.).

Student Branches

College of the Pacific—As a preliminary to showing a film "The Human Gastric Function" *Robert Burns*, of Smith, Kline & French reviewed research work and the history of his company for members at the April 17 meeting. *Ken Zentner* has been appointed General Chairman for the Annual Awards Banquet, a special event of the near future. *Beth Akers, Roy Pickard*, and *Genellen Meyer* will be in charge of decorations, tickets and invitations.

Duquesne University—A 5-feature program was recently presented at the Campus Theatre, with *Mary Lou Stine* leading a discussion on "Physiology of Muscle Spasms"; *Adrian Thomas* reading a paper on "Relaxation Therapy in Muscle Tension & Spasms"; *Marie Olmizzi* reviewing current topics; and *Richard O'Connell* presenting highlights of the book "5-hydroxytryptamine" (Serotonin). *Robert Vitale* served as critic.

Ferris Institute—At a recent meeting President Donald R. Anderson welcomed 7 new members from Alpha Xi Chapter of Phi Delta Chi Pharmaceutical Fraternity into APhA Student Branch. This fraternity maintains 100% student membership in APhA. New members are given complimentary first year membership and encouraged, as part of pledge duties, to solicit as many new APhA student members as possible.

Medical College of Virginia—*R. R. Rooke*, pharmacy proprietor, member of the Board of NARD, and Past President of Virginia Pharmaceutical Association, addressed an audience of 100 on what APhA and NARD do for pharmacists, on April 11. In May *Roy Lee Garrett* was elected President, *William T. Doyle* Vice President, *Adrian E. Andes, Jr.*, Secretary,

Continued on page 346

Branch News Continued from page 345

Warren A. Harrell Treasurer, *Hing Lee (Joe) Kue* Historian, and *John H. Stone, Jr.*, X-Ray Representative. *Bill Crites* and *Ronald Snowden* were appointed to head the membership committee for 1958–59. Guest speaker at this meeting was *Dr. M. L. Neuroth*, Faculty Adviser, who recounted events and experiences at the 1958 APhA Los Angeles Convention. The annual membership drive brought the roster to 165.

St. John's University—Some 400 members heard a talk made by *George Bugbee*, President, Health Information Foundation, on "Role of Health Information Foundation to Pharmacy and Public Health." "Sixty per cent of pharmacists questioned," stated Mr. Bugbee, "think today's practicing pharmacist must have more professional skill and training than 15 years ago, to deal in the new drugs."

St. Louis College of Pharmacy—Seven Pharmacy Colleges participated in the organization of District VI at a convention hosted by this student branch, March 28–29. These were Loyola Univ., Northeast Louisiana State, St. Louis (Mo.), Texas Southern, Texas Univ., Univ. of Kansas, and Xavier Univ. A constitution was adopted and *Richard R. Mazzotti* (St. Louis) was selected as President. *Joanne O'Brien*, who served as Secretary *pro tem* at the convention, was later elected Secretary-Treasurer of the Student Section at the 1958 APhA Convention in Los Angeles.

Southwestern—April get-togethers included the Annual APhA Awards Dinner Dance, April 8, with Speaker *E. R. Weaver*, Exec. Secretary of the Oklahoma State Pharm. Assn.; Speakers *H. B. Frye* and *Dan Rerdon*, Abbott Labs, on April 14; and Speaker *V. E. Vandiver*, Upjohn Co., April 21, who talked on "Orinase" and presented a film entitled "Energy Released from Food." May 5 elections made *Dan W. Woods* President, *S. Ray Johnson* Vice President, *Clifford Meece, Jr.*, Secretary, *Lyle Dean Hawkins* Treasurer, and *Dixie L. Shears*, Historian. *Dr. Charles Swartz* continues as Faculty Adviser.

University of Arizona—*Lou Grosso* of Hoffman-LaRoche spoke April 17 on "You as the Consultant" and discussed new drugs during a question period. A film "Toward Better Pharmacy" was shown.

University of Colorado—*Omar E. Stewart*, Professor of Anthropology, entertained with a program depicting tribal rituals performed by certain Indians while practicing the Peyote religion—Peyote being a narcotic obtained from cactus and considered by the Indians to be a cure-all. He accompanied each ritual with appropriate ceremonial songs.

On May 6 *Dr. H. F. Walton*, Professor of Chemistry, gave a talk on mountaineering, with accompanying slides taken in the United States, Canada, and Peru. *Louella Taylor*, Student Delegate, recounted events at the 1958 APhA Convention.

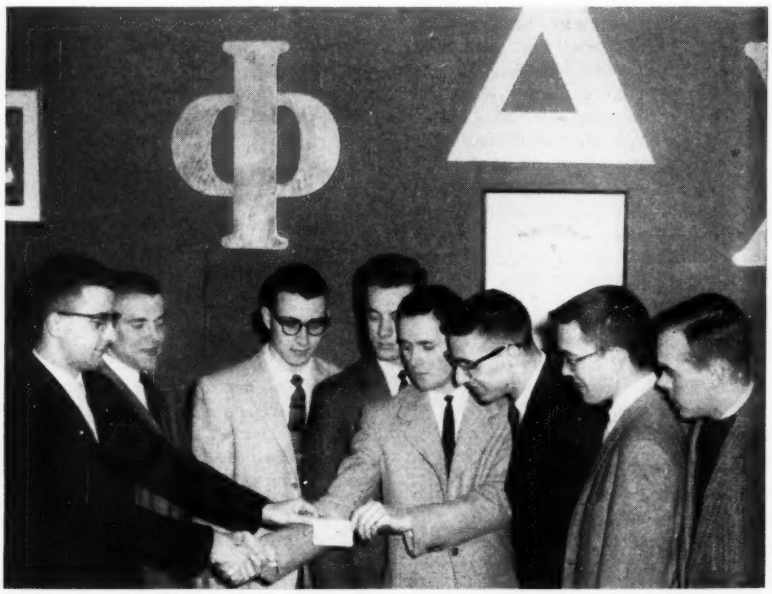
University of Connecticut—Officers elected for 1959 are: *Bernard R. Moore*, President; *Kenneth G. Hermann*, Vice President; *David W. Magettori*, Cor. Secretary; *Roberta Miller*, Rec. Secretary; and *Andre L. St. Germain*, Treasurer. *Robert Grieb*, State Narcotics Inspector, lectured on narcotics addiction May 7. A movie, "Someone's Watching," tying in with his talk, was shown. *Merece Le Geyt*, Delegate to the 1958 APhA Convention, reported on convention happenings.

University of Kentucky—*James P. Arnold* was recently elected 1958 president. During a 3-day workshop and open house, April 1–4, jointly sponsored by the Kentucky Pharmaceutical Association and the University of Kentucky College of Pharmacy, the new Pharmacy Building was dedicated. This University expects to host the 1959 Convention of District IV, with *Robert L. Nold* as Secretary.

University of Oklahoma—1958 elections were recently held putting *Charles E. Bradley* in as President. The theme for this year's annual seminar is "Operation Successful Pharmacy."

University of Texas—At Convocation for the College of Pharmacy, *A. C. Emelin*, General Manager, J. B. Roerig & Co., New York, spoke on "Religion and Professional Ethics," tying his speech in with the University's "Religion in Life" Week. *John Marvin Mohrmans*, Gonzales, Texas and *Jimmy L. Burk*, Austin, Texas, two student members, were elected to membership in Silver Spurs, an honorary service organization.

University of Washington—Members elected *William E. Clark, Jr.*, as President; *Buster B. Green, Vice President; Carol L. Gillespie*, Secretary; *Rodney D. Ice*, Treasurer; and *Audrey L. Wade* and *Carroll Ray Steiner* as Senior and Junior Representatives. A film depicting the family benefits from life insurance was presented.



FERRIS INSTITUTE—7 new members receive congratulations and membership cards from President Donald R. Anderson of this student branch. L to r: Donald Anderson, Allen Dickinson, Richard Zeluff, Richard Bashore, Gerald Gruber, Les Wiscombe, George Duncan, and Richard Beelman.

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Current Comment

ARDP Pharmaceutical Survey

In a paper delivered recently at a seminar meeting of the Pharmaceutical Advertising Club, Arthur C. Emlin, President of the Wallerstein Company of New York, revealed for the first time some basic information in regard to the requirements and preferences of pharmacists. Recently obtained by a depth survey conducted under the auspices of Affiliated Regional Drug Publications of Chicago, the information has been released in a 167-page report available from that organization. It shows:

1. Pharmacists favor the products of those manufacturers who as a matter of policy protect the pharmacist from competition of supermarkets.
2. Practically all pharmacists want information about new medical products well before these products are released to the physician.
3. With regard to advertising, 57% of those responding to the survey indicate that larger ads are more effective; 64% say that color attracts their attention; and 55% report that they tend to read ads repeated from issue to issue more thoroughly than one-shot ads.
4. On the question of retail dealer aids, over 58% of the pharmacists want over-the-counter items packaged in display cartons; 62% want literature for free distribution to customers; 52% want easel display units; and 49% want window streamers.

Polio Indictment

Soon after Dr. Jonas Salk discovered an effective vaccine for the prevention of poliomyelitis the U.S. Public Health Service urged 6 major American biological manufacturers to put forth a "patriotic effort" to mass-produce the vaccine as fast as they could. These firms were: Eli Lilly & Co., Indianapolis, Ind.; Allied Laboratories, Inc., Kansas City, Mo.; American Home Products Corp., New York City; Merck & Co., Inc., Rahway, N.J.; Parke, Davis & Co., Detroit, Mich.; and Cutter Laboratories, Berkeley, Calif. Cutter later withdrew.

As a result of recent action, a Federal Grand Jury indicted the 5 pharmaceutical companies on charges of violating Sections 1 and 3 of the Sherman Antitrust Act in connection with the sale of polio vaccine to Federal, State, and local governments. Assistant Attorney General Victor R. Hansen, in charge of the Antitrust Division, in commenting on the return of the indictment, stated:

"A substantial victory over the disease of polio was won when the success of the Salk vaccine was announced in 1955. In the distribution and sale of this vaccine, which is so vital to safeguard the health of the nation, we must be ever alert to insure that there is no collusion among producers to raise or maintain prices at artificial levels. The indictment returned today charges that vaccine producers have combined to submit uniform bids to public agencies, to adopt noncompetitive terms and conditions of sale, and to establish uniform pricing methods. Price-fixing activities involving such a significant industry and such substantial sales require criminal action by the Department."

Eli Lilly & Co., which produced well over half of the vaccine made in the United States, denied the allegation through President Eugene N. Beesley:

"We are extremely shocked at this charge of alleged price conspiracy against the producers of polio vaccine. So far as Eli Lilly & Company is concerned this is complete nonsense. It would be a strange conspiracy, indeed, that had as its purpose constant decreases in prices.

"We have voluntarily reduced the price of our vaccine 5 different times since we first made it available. As the result of these step by step reductions, the price of Lilly vaccine today is about one-half of what it was at the beginning. This series of voluntary price reductions began a long time before the Justice Department initiated its investigation, and was a result of our productive achievement—not of legal harassment.

We have given the Government a discount of 52½% from our list price on all vaccine paid for by Government agencies.

"Lilly's average profit on all the polio vaccine we have sold to date has been only 6¼ cents per dose. . . ."

"Production of polio vaccine was by all odds the most difficult biological production program ever undertaken by Eli Lilly & Company. Never in this company's history have a few pennies of profit-per-dose required such complex manufacturing procedures and such serious risks to the Company and its employees.

"The investment and the risks were enormous. The demands of the project were such that other programs of research, development, and production had to be deferred. It was only because of our large-scale experimental work in live tissue culture—launched long before its application to polio vaccine was foreseeable—that Lilly was able to assume leadership in the exacting task of producing and testing this vaccine.

"Like many other good American citizens, we have consistently placed the public interest above our own as we sought to make available at the earliest possible moment millions of doses of safe and effective vaccine.

"According to a report published by the U.S. Public Health Service there was a total inventory of 26,423,000 doses of vaccine available as of May 2. Of this total, Lilly vaccine amounted to 24,043,000 doses. One of the problems we now face is the potential loss of much of this 24,000,000 doses of vaccine which we have on hand. (If it loses potency before it is used, the vaccine must be destroyed.) This tremendous amount was produced in anticipation of its need for vaccinating millions of Americans who had not yet been protected against polio at the start of the year. The demand has not materialized.

"It is incredible that as a postscript to one of our greatest achievements, we should now have to face this fantastic suit."

John T. Connor, President of Merck & Co., Inc. has issued the following statement:

"There is absolutely no substance to the charge against Merck. The record of our production and pricing of Salk vaccine clearly demonstrates that Merck did not violate the antitrust laws.

"In late 1953, at the urgent request of the Polio Foundation, we plunged into the risky and difficult problem of manufacturing a safe and effective polio vaccine. It took us two and a half years of intensive and very costly research, development, and production effort before we had a marketable product. Our competitors, who entered this field long before we did, had been marketing polio vaccine for 13 months before we sold our first vial.

"When we produced our first vaccine for sale in May 1956 we had to decide what price we would charge. We could have charged more than the market price, but, at a time of acute national shortage, this would have been considered profiteering. We could not afford to charge less than the market price in view of our heavy costs. We chose the only reasonable alternative. We charged the market price. As soon as we began to move out of the red, which took us another year, we cut the price of our vaccine.

"These pricing decisions were made independently, in conformity with the law and the public interest."

Kenneth F. Valentine, President of Pitman-Moore Company, deplored the indictment of his company through its parent firm, Allied Laboratories, Inc.:

"It is rather difficult to comment except to say categorically that the company has not been a party to any price-fixing agreement, nor has there been any agreement to adopt noncompetitive terms or conditions of sale. We know of no information or testimony which was or could have been submitted to the grand jury which would possibly justify the charge.

"This charge is a poor reward for the courage of management and stockholders of a private business in risking the company's capital in order to participate in a Government-sponsored program to produce an effective preventive for this tragic disease.

"The only cooperation we know of between manufacturers was with respect to testing and perfecting the product at the specific request of an agency of the United States Government."

Parke, Davis & Company, in response to inquiries concerning the Federal charges of anti-trust violations in the sale of polio vaccine, issued the following statement through President H. Laynd:

"We never have conspired with other manufacturers to fix or control the price or the market for this (polio vaccine) or any other pharmaceutical product."

AFPE Graduate Fellows Announcement

The Board of Grants of the American Foundation for Pharmaceutical Education, according to W. Paul Briggs, Secretary, awarded $133,000 for graduate Fellowships for 1958–59 to:

Name	Major	Institution
Merle E. Amundson	Pharm. Chemistry	S. Dak. A. & M.
Howard C. Ansel	Pharm. Chemistry	Florida
Ralph B. Arlinghaus	Pharm. Chemistry	Cincinnati
Robert L. Beamer	Pharm. Chemistry	Med. Col. Va.
Theodore J. Benya	Pharm. Chemistry	Michigan
William O. Berndt	Pharmacology	Buffalo
Lynn R. Brady	Pharmacognosy	Washington
Pearl Mae Bremer	Pharmacology	Purdue
Robert M. Cohn	Pharmacy	Columbia
George E. Crevar	Pharmacy	North Carolina
William A. Daniels	Business Admin.	Wisconsin
(Charles R. Walgreen Memorial Fellowship)		
Charles S. Davis	Pharm. Chemistry	Purdue
Richard A. Deitrich	Pharmacology	Colorado
Henry J. Derewicz	Hospital Pharmacy	Michigan
Robert J. DiCenzo	Pharm. Chemistry	Connecticut
(Sydnor Barksdale Penick Memorial Fellowship)		
Allen I. Dines	Pharm. Chemistry	Ohio
Dale W. Doerr	Business Admin.	Purdue
James T. Doluisio	Pharm. Chemistry	Temple
Arge Drubulis	Physical Pharmacy	Wisconsin
Martin L. Eichman	Pharmacy	Ohio
Carl J. Erdmann, Jr.	Pharmacology	Butler
Herbert W. Felsenfeld	Pharmacology	Yale
(American Pharmaceutical Manufacturers' Association Award)		
Albert J. Forlano	Pharmacy	Ohio
Chester D. Fox	Pharm. Chemistry	Wisconsin
Donald I. French	Pharmacognosy	Washington State
Vincent R. Gardner	Business Admin.	California
Frank W. Goodhart	Pharmacy	Purdue
Wayne M. Grim	Pharmacy	Michigan
Robert P. Halliday	Pharmacology	Pittsburgh
Richard A. Hill	Pharmacy	Florida
James H. Hopkins	Pharmacy	Nebraska
Kent R. Hornbrook	Pharmacology	Michigan
Zola P. Horovitz	Pharmacology	Pittsburgh
Juanita P. Horton	Business Admin.	Alabama
Carl C. Hug, Jr.	Pharmacology	Iowa
Bernard M. Israel	Pharmacy	Wisconsin
Gerald J. Jackson, Jr.	Pharmacy	Connecticut
Carl R. Johnson	Chemistry	Illinois
Harry J. Karavolas	Pharm. Chemistry	Mass. Col. Phar.
Walter D. Kirkland	Pharmacy	Florida
Donald J. Lamb	Pharm. Chemistry	Ohio
(E. Mead Johnson Memorial Fellowship)		
Taylor E. Lindhorst	Botany	Wash. U. (St. Louis)
Irwin Lippman	Pharm. Chemistry	Michigan
Lewis R. Mandel	Biochemistry	Columbia P. & S.
David Marcus	Pharmacy	Florida
John R. Marvel	Pharmacy	Wisconsin
Howard McClain, Jr.	Pharmacology	Minnesota
Joseph E. Moody, Jr.	Pharm. Chemistry	Connecticut
Walter Morozowich	Pharm. Chemistry	Ohio
Charles D. Ogzewalla	Pharmacognosy	Utah
(Sydnor Barksdale Penick Memorial Fellowship)		
Richard A. Ohvall	Business Admin.	Wisconsin
Travis N. T. Olson	Mfg. Pharmacy	Minnesota
(H. A. B. Dunning Memorial Fellowship)		
Gary W. Omodt	Pharm. Chemistry	Minnesota
John D. Palmer	Pharmacology	Minnesota
Max Polinsky	Business Admin.	Wisconsin
John W. Poole	Pharmacy	Wisconsin
Ronald P. Quintana	Pharm. Chemistry	Wisconsin
John W. Rhyne	Mfg. Pharmacy	Florida
William C. Roemer	Pharm. Chemistry	Purdue
Oreste L. Salerni	Pharm. Chemistry	Duquesne
Edwin G. Scheur, Jr.	Pharm. Chemistry	Rhode Island
David W. Schieser	Pharm. Chem stry	California
Michael A. Schwartz	Pharmacy	Wisconsin
Helen R. Seitz	Physical Chemistry	Wayne State
Earl W. Seugling, Jr.	Pharmacy	Ohio
Anthony P. Simonelli	Pharmacy	Wisconsin
Martin O. Skibbe	Pharm. Chemistry	Purdue
Edward Smith	Pharm. Chemistry	Michigan
Harry A. Smith	Pharmacy	Purdue
William E. Smith	Pharmacy	Michigan
Theodore D. Sokoloski	Pharmacy	Wisconsin
Muni M. Staum	Pharm. Chemistry	Florida
Christopher R. Tamorria	Pharm. Chemistry	Maryland
Robert E. Taylor, Jr.	Pharmacology	Florida
Bobby B. Thompson	Pharm. Chemistry	Mississippi
Daniel N. Tousman	Business Admin.	Wisconsin
James A. Waters	Pharm. Chemistry	Iowa
Nathan Watzman	Pharmacology	Pittsburgh
Robert A. Wiley	Pharm. Chemistry	California
Edward P. Winters	Pharmacy	Florida
(Josiah Kirby Lilly Memorial Fellowship)		
Paul E. Wray	Pharmacy	Nebraska
Paul Zanowiak	Pharmacy	Florida

The 82 AFPE Fellows for 1958–59 shown in the table to the left will pursue their graduate studies at 34 universities.

Edwin Roy Hammarlund, Ph.D., Associate Professor of Pharmacy, State College of Washington, received a Gustavus A. Pfeiffer Postdoctoral Research Fellowship for study at the Royal Danish School of Pharmacy, Copenhagen, Denmark. Paul Vincent Buday, Ph.D., Assistant Professor of Biological Sciences, also received a Pfeiffer Research Felowship for studies to be carried out at Fordham University.

The Board also allocated $25,000 for undergraduate scholarships in colleges of pharmacy for the 1958–59 academic year. Members of the Board of Grants are: A. J. Brumbaugh; Daniel Z. Gibson; Charles J. Lynn; Robert Lincoln McNeil; and Ernest Little, Chairman.

1957 Edwin Leigh Newcomb Memorial Awards

The following Newcomb Awards will be presented at the 1958 meeting of The Plant Science Seminar, Ferris Institute, Big Rapids, Michigan. Members of the AFPE Edwin Leigh Newcomb Memorial Awards Committee are: George M. Hocking; John E. Seybert; and Heber W. Youngken, Chairman.

Undergraduate—Charles W. Dickerson, Ferris Institute, Division of Pharmacy. Prize Winning Essay "A Pharmacognostical and Phytochemical Study of *Mainanthemum canadense* Desf."

Graduate—Mahmoud D. Sayed and Jack L. Beal, Associate Professor of Pharmacy, Ohio State University, College of Pharmacy. Prize Winning Essay "A Study of the Influence of Gibberellic Acid on the Macromorphology, Micromorphology, and Biosynthesis of the Glycosides of *Digitalis purpurea* L."

77th Annual PA Meeting

The Proprietary Association met at the Greenbrier, White Sulphur Springs, W.Va. May 11–14. Speakers on pharmaceutical problems were President Sherwood E. Silliman; Dr. Howard A. Prentice, Executive Vice President; and James F. Hoge, General Counsel, all of the Proprietary Association; and Dr. Albert H. Holland, Jr., Medical Director of the U.S. Food and Drug Administration.

President Silliman in his address agreed with statements previously made by Dr. Robert P. Fischelis, Secretary of the APhA, to the effect that:

". . . the establishment of criteria for legal restriction of over-the-counter drugs to distribution under professional supervision, must be a first step toward uniform regulation on this point. Before local pharmaceutical associations pass judg-

ment on the effectiveness of the Drug Trade Conference program, the Conference should be given an opportunity to develop that program and to demonstrate its practicality."

President Silliman said:

"Let's give the National Drug Trade Conference, acting for the entire industry, a chance to work out the problem. To this end, it would be most helpful if, in the meantime, there could be a moratorium on legislation relating to the revision of state Pharmacy laws as they bear upon the exemption for Proprietary Medicines. . ."

Dr. Prentice emphasized that:

"We must continue to improve our relationships with organized Pharmacy as a major activity. Too frequently throughout the country our stand on restrictive sales is interpreted as expressing the opposition of the Association towards all levels of Pharmacy and its many problems. . . The Proprietary Association deems it most unfortunate that the punitive resolution was rushed through the last Session of the House of Delegates at the Los Angeles meeting."

He referred to the resolution to terminate representation of the PA in the APhA House of Delegates.

James F. Hoge, General Counsel of the PA, discussed restrictive sales at length. He mentioned the bills introduced in New York and New Jersey this past winter whereby outright restriction "would apply to any product label with warnings or cautions against misuse and any drug which is likely to be harmful if the whole package is taken at one time."

Referring to the requirement that the pharmacist acquaint the customer with the nature of the preparation, the dosage, and the warning or caution contained on the label, he said.

"If the pharmacist should fulfill his statutory duty, explaining the nature of the product and its use, he would convey his own express warranty to the purchaser and become liable for any injury resulting from the purchaser's reliance on his warranty. This would completely change the relationship of the pharmacist and his employees to the sale of proprietary medicines. One of the reasons for the exemption of proprietary medicines from the Pharmacy Act is that no special duty or liability is imposed on the pharmacist or his clerks. In its original package, a proprietary medicine is completely labeled as to contents and uses and directions, and it is sold by direct advertising to the consumer. Thus, the pharmacist is under no liability with respect to composition or labeling or directions as to use.

"If the pharmacist should not fulfill the requirement, and if his fulfillment of it would have prevented the consumer's injury, he might be found to be negligent as a matter of law, and liable for all injuries resulting therefrom."

Referring to the increasing ratio of population to pharmacies, he said.

"Production and consumption of goods must wait upon distribution. Proprietary medicines in the past have been sold through non-drug stores. They are now. There are not enough drug stores and druggists, and their numbers are not increasing in the same ratio as the population. Indeed, there are now urgent recommendations for extensive and expensive recruitment programs to increase the number of students in colleges of pharmacy. And the increase may be more difficult of attainment under a lengthened, 5-year pharmacy course."

He pointed out that contracting the number of distributing outlets for proprietary products is not in the interest of an expanding economy.

Communicable Diseases Summary

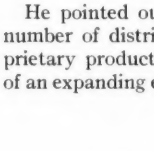
The number of cases of the communicable diseases shown in the table below are based on reports by Health Officers of each State and of Alaska, Hawaii, and Puerto Rico to the National Office of Vital Statistics of the Department of Health, Education, and Welfare, Washington, D.C. The number of cases of each disease occurring during each of the last 4 weeks are reported and also cumulative totals to date for 1958 and for the corresponding period of 1957, as well as the 1953–1957 median for this same period. The approximate seasonal low point for each of the diseases is shown in the last column.

Communicable Disease	Cases Report for Week Ending				Cumulative Number			Low Point (Approximate Seasonal)
Selected Notifiable Disease	*Apr. 19, 1958*[a]	*Apr. 26, 1958*	*May 3, 1958*[b]	*May 10, 1958*	*First 19 weeks 1958*	*1957*	*Median 1953–57*	
Anthrax	–	–	–	–	1	10	12	[c]
Botulism	–	–	–	2[d]	2	–	5	[c]
Brucellosis	17	16	18	21	258	346	433	[c]
Diptheria	14	11	15	5	290	381	679	July 1
Encephalitis, Infectious	31	40	30	42	520	468	468	June 1
Hepatitis, infectious and serum	447	277	346	303	6,463	7,051	12,595	Sept. 1
Malaria	–	2	2	2	21	29	82	[c]
Measles	36,869	40,004	41,804	42,754[e]	461,082[e]	312,669	365,175	Sept. 1
Meningococcal infections	47	48	43	60	1,151	1,070	1,740	Sept. 1
Meningitis, other	32	46	39	28	923[f]	623	– – –	– – –
Poliomyelitis	12	14	19	19	318	780	1,748	Apr. 1
Paralytic	5	6	7	7	165	382	– – –	Apr. 1
Nonparalytic	2	5	8	8	98	279	– – –	Apr. 1
Unspecified	5	3	4	4	55	119	– – –	Apr. 1
Psittacosis	4	1	7	3	53	104	104	[c]
Rabies in man	–	–	–	–	2	2	2	[c]
Typhoid fever	16	14	16	17	266	361	490	Apr. 1
Typhus fever, endemic	1	–	1	2	16	33	33	Apr. 1

[a] Data exclude report from Mississippi for the current week. [b] Data exclude report from Arkansas for current week. [c] Data shows no pronounced seasonal change in incidence. [d] Reported in Kentucky; [e] Includes 2,608 delayed cases from Iowa. [f] Revised Figure. Symbols: 1 dash (–): no cases reported. 3 (– – –): data not available.

Guggenheim Fellowship to Pharmaceutical Historian

Dr. Alex Berman, Assistant Professor, University of Michigan College of Pharmacy, has been granted a Guggenheim Fellowship to carry on a comparative study of hospital pharmacy in France and in the United States.



Dr. Berman

It is expected that this project will yield data significant to the historian of pharmacy and medicine as well as to the practicing pharmacist.

Leaving this country in September, Dr. Berman will spend a year abroad pursuing research in such centers as Paris, Montpellier, Strasbourg, Nancy, and Lyon. Convinced that in its current stage of growth, American hospital pharmacy can learn a great deal from the long and fruitful experience of French hospital pharmacy, Dr. Berman will study the educational, social, scientific, economic, organizational, and professional aspects of French hospital pharmacy in historical and contemporary contexts.

Dr. Berman received his Ph.D. degree in the history of pharmacy and science at the University of Wisconsin. He has worked as a hospital pharmacist with the Veterans Administration, the University Hospital in Ann Arbor, and other institutions. During 1953–1954, he served as a Staff Associate at the APhA headquarters in Washington, D.C.

Letters

PA Resolution

Sir:

I presume that you prepared the report on the meetings of the House of Delegates as published in the May 1958 issue of the PRACTICAL PHARMACY EDITION of *The Journal*. In the report of the final session of the House on page 285, you make it appear that the resolution calling for the termination of representation of the Proprietary Association originated with me. Since you were present at this session of the House, you should have understood why I was asked to present this resolution and that I was not the author of it.

This resolution came from the Resolutions Committee and I was asked to read it by the Chairman of the Resolutions Committee, Mr. John J. Debus. Mr. Debus wished to be free to discuss this resolution which he could not have done had he presented it as he did all others.

While I endorsed this resolution as a member of the Resolutions Committee, I did not originate it. The resolution came from the New Jersey delegation and was endorsed unanimously by the Resolutions Committee of the House of Delegates.

As you reported it, the circumstances surrounding it seem somewhat distorted. Although this may not have been your intent, I do wish to keep the record straight.

I will appreciate it if you will publish this as one of the Letters to the Editor since I think it important that the readers of THE JOURNAL understand the origin of the action taken.

L. F. Tice, D.Sc.,
Philadelphia College of
Pharmacy and Science

APhA Headquarters Building

Sir:

Several months ago, I was fortunate to have the opportunity to visit our national headquarters in Washington. Frankly, I was rather surprised and impressed with the physical appearance of the structure itself. Again I was pleasantly surprised when I entered and was given a comprehensive tour of the building. I wish that all pharmacists might have the pleasurable experience I enjoyed. I'm confident that our membership would increase twofold.

May I add my voice to Dr. Walter F. Hauser's [Feb. issue, p. 76] and many others in urging the ASSOCIATION to do everything within its power to obtain direct commissions to the military for R.Ph.'s. Not only would this add immeasurable prestige to the practice of pharmacy, but it would provide those in the military with proper professional care as it pertains to pharmacy just as they expect and receive in civilian life.

Marvin B. Shlensky, R.Ph.
8400 S. Scottsdale Avenue
Chicago, Ill.

More Congratulations

". . . Again I want to take this opportunity to congratulate you on the tremendous improvement you have made in THE JOURNAL . . ."

D. L. Bruner, Executive Secretary,
Iowa Pharmaceutical Association

". . . THE JOURNAL came a few days ago and I sat down at once and read it from cover to cover . . . The coverage of news is remarkable, from every phase of Pharmacy, and interestingly presented. Your editorial is timely and admirably covers the broad scope of APhA interests, the only organization in U. S. Pharmacy to do so . . . This was the idealism visualized by the founders of the APhA and needs constant re-emphasis. . . . You have made THE JOURNAL a truly national medium for Pharmacy."

E. Fullerton Cook
Media, Pa.

"Your editorial in the September issue was excellent. It certainly gives a plan for attack in making a Pharmacy program effective. . . ."

Joseph R. DePhilip
Meadville, Pa.

". . . I am glad that we could submit an article that qualifies for publication in your excellent JOURNAL. We continue to enjoy the new form and size of THE JOURNAL. . . ."

Noel E. Foss, Dean
School of Pharmacy
University of Maryland

". . . May I also compliment you on your editorials—they are fine and so is the coverage that you and Dr. Fischelis gave on the Asian Influenza. It is very fine, in fact the entire issue is excellent and will, I am sure, stimulate interest in our membership. I have had a number of our members locally call and tell me how much they enjoyed reading our JOURNAL now. You and your staff are doing a fine job. With your continued efforts this can easily become the most informative pharmaceutical publication put out. . . ."

Jack B. Heinz
Heinz Apothecaries
Salt Lake City, Utah

"Now that many of the conventions are over I want to tell you that THE JOURNAL looks newer and better with each edition. Congratulations! . . ."

John C. Helenore
Technical Editor
Chain Store Age

"Please accept my expression of appreciation for your kindness in the fine coverage you have given the Fourth Pan American Congress of Pharmacy. While the past has been good, the present July issue with the wonderful cover was something which those of us associated with the program are happy over. . ."

Harold G. Hewitt, Chairman
Program Committee
4th Pan American Congress
of Pharmacy and Biochemistry

". . . The new JOURNAL looks splendid and the contents are much more inclusive. Congratulations on a fine job!"

Don Francke, Chief Pharmacist
University Hospital
Ann Arbor, Mich.

". . . and also to compliment you on the very fine appearance the *Practical Edition* is now making, with contents that are so interesting and valuable that it now becomes a 'must' to read THE JOURNAL from cover to cover; not only that, but to keep it handy for constant reference."

John E. Kramer, Registrar
Philadelphia College of
Pharmacy and Science

"I read with interest your editorial which appeared in the August issue. Your remarks were cleverly worded and to the point. . . ."

Conrad E. Kruse
Lea & Febiger
Philadelphia, Pa.

"Your editorial on page 29 of the January 1958 *Practical Edition* is excellent."

James H. Merritt, Secretary
The Proprietary Association

". . . Seriously, I think THE JOURNAL is the best it has ever been and you deserve our congratulations. . . ."

Jack E. Orr, Dean
College of Pharmacy
University of Washington

"Thank you for the best Pharmacy magazine printed. . . ."

Pisano Drugs
Chicago, Ill.

Editorial

Difference without Discord[1]

The American Pharmaceutical Association has within its membership men and women whose personal interests and active work differ greatly in detail. Few, if any, national organizations of any kind include within their formal bounds a greater variety of individual interests. Pharmacy is a complex thing and its phases are many. Among our members are many whose primary interest is in one of the scientific aspects of Pharmacy. Others are more concerned with commercial phases. Still others dedicate their lives to the proper teaching of all that pertains to Pharmacy, while yet others devote all or part of their efforts to matters of legal import or to governmental controls.

Complexity of Pharmacy

It would be difficult to make a complete list of all the varied phases of Pharmacy represented by our membership, but such a list would include individuals whose major activity is in research and development of new medicinals; production; quality control; development of standards; distribution, both wholesale and retail; compounding; dispensing; in teaching with all its problems of science, commerce, finance, and management; in sales; and in promotion and advertising at every level in which the pharmacist works, from the smallest drug store to the largest manufacturer. To this list we must add those whose special duties are in the fields of hospital pharmacy, members from the Food and Drug Administration, the National Institutes of Health, and Boards of Pharmacy. To the list each one of you can add others which may come to mind.

With such a variety of thought about so many problems, all connected with Pharmacy as a whole, it is inevitable that there will be diversity of opinion and sometimes conflicting interpretation of facts.

Differences of opinion lead to discussion and from here there are two roads which may be followed. The one proceeds through dissension to discord, divisions, and weakness; the other through consideration, to concord, unity, and strength. The American Pharmaceutical Association is fortunate that those who designed its Constitution and By-laws had the foresight to so define its scope as to permit this varied assembly of minds and activities within one organization.

APhA Objectives

Article II of the constitution states at length the "Objects" of the Association. In brief, but in the exact words of basic significance and numbered as in the constitution, they are as follows:

1. To improve and promote the public health.
2. To foster and encourage interprofessional relations.
3. To improve the art and science of Pharmacy.
4. To provide a system of education and training.
5. To support a system of licensure and registration.
6. To develop, maintain, and enforce a code of ethics.
7. To cooperate to the fullest extent in conducting research examinations, investigations, and experiments, and in the dissemination of information in the field of Pharmacy with agencies of the United States Government . . . and similar agencies of States and Territories of the United States.

In our Association we have tried to set up means whereby these words can be translated into useful deeds. We will not always agree as to how the words may best be translated into action, but what is the reason we have thus endeavored to give expression to our desires? Partly it is because of our mutual interest in medicinal products. More importantly it is because of our common duty to make and use them well. But these and every other meaning they may have is based on our common responsibility to those who for lack of special knowledge must place their trust implicitly in these medicines and especially in us.

Orchestra of Pharmacy

You have listened to a great orchestra carefully testing and tuning their instruments before a concert. Each individual working with his own instrument is doing what he thinks is needful. Each sees to it that his instrument is perfectly tuned and ready to fully respond to his demands upon it. The noise may not be loud but it is harsh and meaningless for there is no unity of action, no harmonious concord of sound.

[1] This guest editorial was presented as the address of the Honorary President of the American Pharmaceutical Association at the Second General Session of the APhA Los Angeles Convention, April 24, 1958.

But when the symphony begins and each is playing from his particular part of the musical score there is no longer discord but harmony. And much of the beauty and power of the music is due to the fact that the instruments are different and the tones they produce are different. The violins or clarinets or trumpets may sound the same note but the quality of tone produced is distinctive for each instrument. Our deep emotions may be awakened by the rich, full tone of the cello, our spirits stirred by the blare of trumpets, and weary bodies roused by the rhythmic beat of the drums.

These very differences when rightly used enhance the beauty and meaning of the music. But an instrument out of tune or the playing of wrong notes impairs the harmony and spoils the effect of the music.

Differences are Productive

So is it in an organization such as this. The spiritual and intellectual endowments of men differ as do the tonal qualities of the instruments, but all are needed and their very differences enhance the value of the organization, but wrong ideas and out-of-tune people impair the harmony.

Difference is necessary. Lack of difference is monotonous and deadening.

A great symphony cannot be written without differences in form of the music, nor performed without the skillful blending of different tones from different instruments. A great painting comes from the artistic application of different colors to a plain canvas. There is even necessity for differences in the food we eat.

Complete unanimity of ideas would be monotonous and unproductive. Differences in thinking are not only useful but necessary to progress. Dissension and discord arise usually when we place excessive emphasis on things of minor importance.

We are all different and yet how alike in our hopes and aspirations! We often have more in common in the secret ideals of our lives than we are inclined to believe.

Our Major Duty

Our greatest problem in everything we do or say is to distinguish clearly in our minds those things which are of fundamental importance from those which are of minor value. The number of the first are few while the latter are many. We argue over little things and forget the greater responsibilities. We worry about words and forget principles. We let personal prejudice warp our judgment of the general good.

Our duty is to carry the responsibility for devising, producing, distributing, and dispensing medicines for the cure or relief of bodily ills. In every land and in every time the healing of the body has been very close to the restoration of the soul.

If we keep in mind this great responsibility it will be much easier to blend our many differences into harmonious accord.

There can be difference without discord.

Frank O. Taylor

JUNE

Public Relations

SCHEDULE

■ One important fact should be kept in mind regarding public relations—that is "we can't repair the past—but we don't have to repeat it." Good public relations is never accidental, never pure luck. It comes about only when men are alert enough to recognize its importance.

Special Events—National Flag Week (8–14); Schools and Colleges Graduation Month; Father's Day (15).

Speeches—This is the ideal month to address one of your local service clubs such as Lions, Kiwanis, Rotary, etc., or a civic group or fraternal organization on the subject "The Hazards of Sunburn and Exposure" and would represent a valuable health service to your community.

Newspapers—Your local or neighborhood newspaper should be delighted to receive a short newsy article on vacation accidents. This would be timely and would help to focus attention on the health service provided by pharmacies everywhere. A good feature in your advertisement this month would be on the subject "Proper Storage of Various Drugs and Medicines."

Radio and TV—Spot announcements and interviews on first aid kits and their contents would certainly be of public interest. Also, the many activities and associated hazards in which they are employed would represent a valuable public service.

Direct Mail—One mailing to physicians this month on new prescription products and one mailing to the laity on hay fever and pollens would round out a nice direct mail program.

Bulletins—Issue an Employee's Bulletin on the month's public relations program, and point out the many vacation hazards which they might be called upon to discuss with customers throughout the summer.

■ Materials for year-round public relations programs are available from the American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington 7, D.C.

"We have a choice—of changing our ways, or, putting up with what we have."

Prepared by J. Warren Lansdowne, Chairman, APhA Committee on Public Relations.

STRAIGHT FROM Headquarters

Robert P. Fischelis, Secretary

Change in Medicare Drug Payment Policy

As as of July 1, 1958, the Office of Dependents' Medical Care will cease to pay physicians for drugs furnished to maternity patients.

Medicare patients may continue to obtain medication from pharmacies of uniformed services medical facilities upon prescription of a civilian physician if the items prescribed are available there or they may obtain such medication from civilian pharmacies at their own expense.

This important change in policy stems from the recommendations of the National Advisory Committee on the Medicare Program which met in the office of the Secretary of Defense on May 9.

The Committee had been asked to consider revision of the policy with respect to payment for drugs and had set aside time for discussion of the subject.

The Secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION had communicated the Resolution passed at the Los Angeles meeting of the House of Delegates on the subject of payment for drugs to General Robinson, the Executive Director of the Medicare Program and had discussed with him, again, the present situation and the further complaints of pharmacists.

Dr. Frank B. Berry, Assistant Secretary of Defense, Health and Medical, invited Dr. Fischelis to discuss the program with the Advisory Committee on May 9. A subcommittee on drug policy had been named to make recommendations to the full Committee following this discussion.

The following statements were presented to the full Committee on May 9 by Major General Paul I. Robinson and Dr. Robert P. Fischelis:

Statement on Drug Policy by General Robinson

The development of the Drug Policy for maternity patients is meticulously outlined in my talk to the House of Delegates of the American Pharmaceutical Association on 9 November 1957, a copy of which has been made available to each member of the Advisory Committee. Briefly, it developed from three basic concepts of the program:

1. The desire to conform to the practice of medicine in local communities;
2. The wish to render adequate service to dependents; and
3. The recognition of the fact that vitamins and minerals are considered to be requisites to pre-natal maternity care.

After many requests from physicians, the following policy was published on 21 February 1957:

> "Physicians may add to their statements those *drug items* which have been directly or indirectly furnished to the maternity patient. (Direct furnishing of drugs is: supplying drugs by the physician's office to the patient; indirect furnishing is: the physician writes a prescription to the patient but has the pharmacy bill him (the physician) for the drugs dispensed.)"

The favorable results of this policy are these:

1. Many physicians are pleased.
2. Several pharmacists are known to have worked out satisfactory arrangements with physicians and they, too, are pleased.
3. Several patients, who have thus received essential medication which otherwise would probably not have been available to them, have been brought to our attention.

The unfavorable results of this policy are these:

1. The Pharmacy profession feels that the program is circumventing the normally established methods of prescribing drugs, and that it may serve as a bad precedent for other programs.
2. The Medical profession, as represented by the state medical associations, are divided in their opinions of the policy. Of those with whom we have negotiated, 10 feel the policy should be changed and 11 feel that it is all right. Only Florida has stated that it will not continue the policy in effect in that state.
3. The objections of the Medical profession stem from the following: (a) Patients demand this service from the physicians, thus influencing them to turn from their ordinary methods of medical practice. (b) Physicians become collecting agents for pharmacists. (c) Additional clerical assistance and time are required by some physicians.
4. The policy creates an adverse effect on the uniformity of the program, since only 14.5% of the maternity patients have benefited.
5. The policy has caused an additional expense of approximately $500,000 per year, although administrative expense has been negligible.
6. The policy may have afforded opportunities for abuses.

The only solutions to the problem which have been proposed are

1. Establish a system of payment directly to pharmacies similar to the Veterans Home-Town Drug Program. This is a good program. It entails authorizations of regional offices, which Medicare does not have, but this detail might be administratively circumvented. It also entails an administrative cost of approximately 8% to 15%, which would amount to $50,000 or more each year. This amount would increase the over-all administrative cost of the program less than 1%. There is a question as to whether this could be accomplished administratively. It is our impression that it could not be established without concurrence of the Armed Forces Committee of the House of Representatives and that legislation is probably required.
2. Discontinue the policy—thus forcing the patient to obtain necessary drugs at service facilities or purchase them from personal funds. This would be opposed by the pharmacy profession on the grounds that the Government would be denying an essential concommitant service. The Medicare Program, however, is not all inclusive—it does not provide ambulance service or dental service to maternity patients, although these also may be considered as essential concommitant services. This action would please some physicians and displease others. It conceivably would cause a hardship on some patients. The average cost per patient receiving drugs under the policy, according to our latest study, is $19.18 per period of pregnancy. A lead article in the Army-Navy Journal, printed on page 1 and carrying the caption, "Medicare Officials May Withdraw Free Drugs From Expectant Mothers; First Year Sees More Medical Benefits For Dependents," brought not one letter of protest to the Journal or to our office.

3. Continue present policy. This would continue to be opposed by the Pharmacy profession and by several state medical associations.
4. Amend Public Law 569 to clearly provide for furnishing drugs, through civilian sources, to maternity patients during pre- and post-natal periods.

There are only two actions, in my opinion, which can be taken immediately.

1. Continue the present policy, or
2. Discontinue it.

It is my recommendation that the policy be discontinued as of some future specified date and that information concerning hardships caused be accumulated to be used as a basis for future legislation if deemed desirable.

Statement on Drug Policy by Dr. Fischelis

May I at the outset of these remarks express my appreciation of the opportunity to discuss with you again the problems which have arisen with reference to supplying drugs for maternity patients under the Dependents' Medical Care Program. And may I also acknowledge with thanks the patient and sympathetic approach exhibited by General Robinson in all of our discussions on this difficult problem.

As you know, the Council of the AMERICAN PHARMACEUTICAL ASSOCIATION accepted the suggestion approved by your committee that a pharmacy consultant be appointed to the Executive Director of the Dependents' Medical Care Program, and I was named to act in that capacity last November.

The House of Delegates of the AMERICAN PHARMACEUTICAL ASSOCIATION at its meeting last November made it clear that the appointment of a consultant by the ASSOCIATION was not to be interpreted as an endorsement of the present system of payment for drugs under the Medicare Program, and urged members of the ASSOCIATION to make recommendations with regard to establishing the principle that payment for pharmaceutical services should be on the same direct basis as now obtains in the case of services of physicians.

The Secretaries of all State Pharmaceutical Associations were contacted directly to obtain their suggestions, and a bulletin was circulated to a wide list of national, state and local pharmaceutical organizations, to colleges of pharmacy, to local branches of the AMERICAN PHARMACEUTICAL ASSOCIATION and the American Society of Hospital Pharmacists, as well as to the State Boards of Pharmacy, inviting recommendations.

On 31 January 1958, a special committee appointed by the National Conference of State Pharmaceutical Association Secretaries met with us to discuss this problem, and we had the benefit of the presence of Colonel E. G. Rivas of General Robinson's staff at this meeting. The Committee of State Secretaries reported that they had interrogated all State Pharmaceutical Association Secretaries by questionnaire to learn how many favored application of the Veterans' Administration Home Town Medical Care Program to the payment for drugs under Medicare. Thirty states favored this principle. Two were indefinite in their replies and seventeen had not replied. The consensus of the discussion at this meeting was that if the VA Program cannot be applied to Medicare, efforts should be made to amend the Dependents' Medical Care Law so as to provide for direct payment to pharmacists for their services.

My report to the House of Delegates of the AMERICAN PHARMACEUTICAL ASSOCIATION on 23 April 1958, at Los Angeles, of which copies are available to you, reviewed the efforts to arrive at a procedure which would be more satisfactory to pharmacists, and I requested discussion and guidance in the form of recommendations which might be transmitted to General Robinson.

The discussion in the House of Delegates following the presentation of the report revealed an ever-growing and very positive desire on the part of the pharmaceutical profession to have something done to definitely establish independent payment for drugs and pharmaceutical services to pharmacists. A number of resolutions on the subject had been presented to the House of Delegates, and the Resolutions Committee selected the one from the Arizona State Pharmaceutical Association as being representative of the thinking and desires of all the groups which have acted in this matter. This resolution reads as follows:

WHEREAS, the payment to pharmacies for Medicare prescriptions is not in keeping with established practices and results in hardships and injustices to pharmacies, and

WHEREAS this procedure can only be changed by changing the law pertaining to Medicare; now, therefore, be it

RESOLVED, that the American Pharmaceutical Association here assembled inform the Congress that we strongly urge that changes be made in laws pertaining to Medicare so as to enable direct payments to the pharmacies for Medicare prescriptions.

The resolution was unanimously adopted after discussion.

In the light of the known views of the pharmaceutical profession and the strong feeling that prevails in many of the national state and local pharmaceutical organizations, it is to be expected that unless something can be done administratively to correct the situation complained of, members of Congress will be requested to enact legislation to amend the Dependents' Medical Care Act, so as to provide for direct payment to pharmacists for drugs to be supplied by them.

Pharmacists feel that the present system of supplying and paying for drugs is encouraging dispensing by physicians, which is contrary to the generally accepted program of furnishing drugs on prescription or other order from physicians.

General Robinson and I have discussed the pros and cons of the situation at great length, and I believe we have explored every possibility for altering the present program without requesting legislation.

It is my belief, and it is, of course, the view of the vast majority of pharmacists of the United States, and specifically of the AMERICAN PHARMACEUTICAL ASSOCIATION, that the procedure for furnishing prescriptions and medical requisites established by the Veterans Administration for the so-called "Home Town Medical Care Program," could and should be applied to supplying drugs under the Dependents' Medical Care Program.

General Robinson has pointed out that it is a good program, and while it may add somewhat to the expense of administration, the overall increase in the cost would be less than one per cent.

I am not prepared to refute the statement that this procedure could not be established under the present law, but I would respectfully urge this Advisory Committee to consider recommending either a joint or separate approach by the Department of Defense and the national pharmaceutical organizations to the appropriate congressional authorities to determine whether there would be objection to this method of handling the situation under the present law without necessarily amending it.

General Robinson has indicated that the pharmaceutical profession would oppose discontinuing the policy of supplying drugs now authorized for maternity patients. Actually, some members have advocated this, on the basis that patients would then have to purchase necessary drugs directly from pharmacists. It was brought out, however, in the discussion in our House of Delegates that unless dispensing physicians were also denied the opportunity to bill the government for drugs dispensed directly to their patients, discontinuance of the present policy would encourage dispensing by some physicians who are otherwise prescribers.

Even if dispensing physicians were not reimbursed by the government for drugs dispensed to their patients there would be a strong tendency for some of those who dispense regularly, to sell drugs to Medicare patients, as they do to others, because of special discounts allowed by certain pharmaceutical manufacturers to dispensing physicians. This would encourage physician-dispensing in general, which is frowned upon by both organized medicine and pharmacy.

It is therefore our considered recommendation that before any steps are taken to discontinue the present policy, a strong effort should be made to establish a program based on the proven Veterans Administration experience. This would require immediate contacting of the appropriate Congressional authorities. In the event that direct payment to pharmacists can be accomplished only by amendment of Public Law 569 we strongly and respectfully urge your immediate approval of legislation to accomplish this.

The members of the Advisory Committee discussed these statements in detail and both General Robinson and Dr. Fischelis were asked numerous questions.

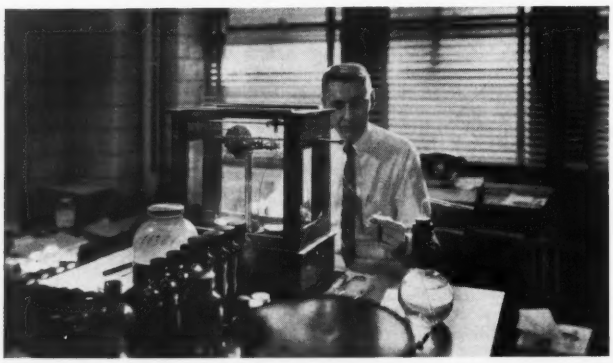
The subcommittee then submitted the following resolution which was adopted by the committee as a whole and provides the basis for the new policy announced by the Office of Dependents' Medical Care to become effective July 1.

Advisory Committee Resolution on Drug Policy

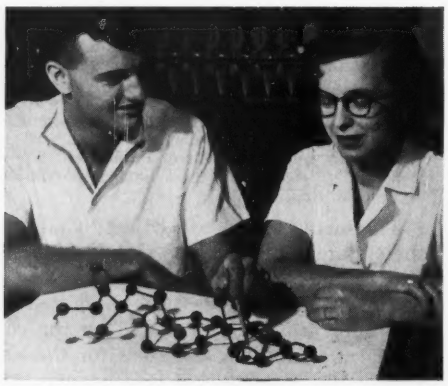
The Advisory Committee is cognizant of the fact that the present policy of furnishing drugs to maternity patients through reimbursement of physicians who furnish these drugs directly from their own stocks or indirectly through arrangements with pharmacies was established in an endeavor to approach more nearly *complete* maternity care as provided for in the

Continued on page 373

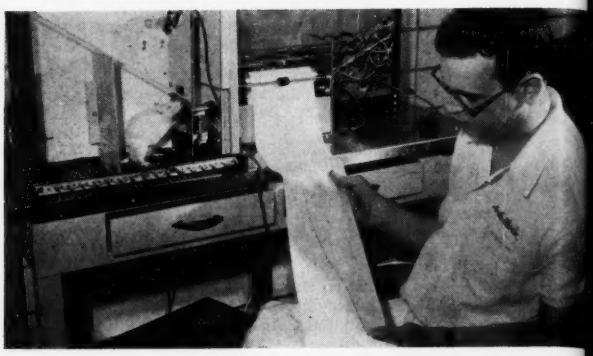
A pharmacist engaged in experimental work uses a hypodermic syringe to inject a new liquid drug into a capsule (Abbott Labs.).



Pharmaceutical research, closely related to compounding of prescriptions, consists of improving existing products and preparing new ones (Courtesy Eli Lilly & Company).



For a better understanding of a new drug, two pharmacists study its molecular structure (Charles Pfizer & Co., Inc.).

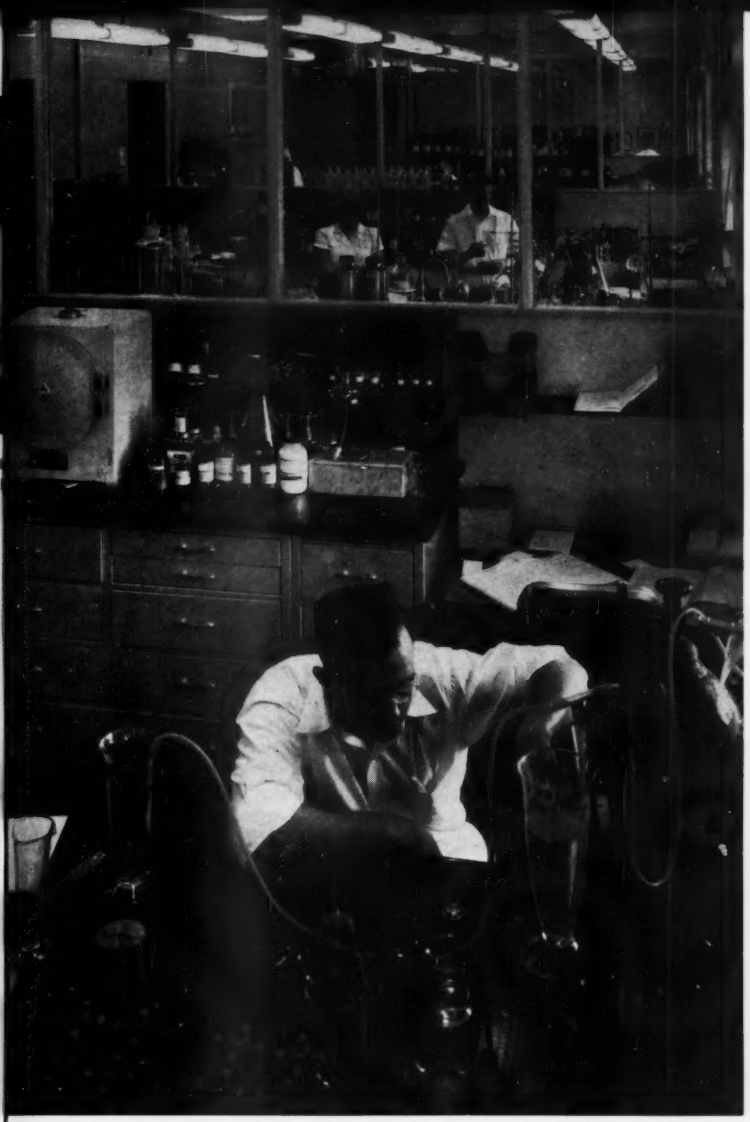


A pharmacist checks the cumulative records of an avoidance response test in a pharmacology laboratory using a white rat and electronic equipment (S K &

Research

Pharmaceutical research is the starting point for the development of each new wonder drug. In the research laboratories of the pharmaceutical industry are brought together pharmacists, physicians, biochemists, pharmacologists, physiologists, organic chemists, bacteriologists, statisticians, virologists, and other specially trained men and women. Highly effective teams of scientists and administrators with diversified experience work with the most modern scientific apparatus and instruments to bring into physical reality ideas for more accurate diagnostic aids and more effective medication to prevent, mitigate, or cure diseases. ■

Research scientists and administrators check preliminary data as they plan for a pharmaceutical research program to create a new prescription product.



A glimpse into one of the laboratories where pharmacists help perfect drug specialties. The purpose of this experiment is to prevent oxidation of sulfonamides (Courtesy Abbott Laboratories).

A pharmacist, knowing the importance of a high degree of accuracy, measures an ingredient with a buret (Abbott Labs.).

Review of the literature is a preliminary step in any pharmaceutical research program (Courtesy Smith Kline & French).

This flame photometer is used to test the concentration and the purity of parenteral solutions (Courtesy Abbott Laboratories).

Women pharmacists often become very good analysts because of their ability for making sensitive adjustments (Courtesy S K & F).

A modern look at industrial pharmacy's

educational requirements

by Harold G. Hewitt

THIS BRIEF ARTICLE concerning education, while pretending to serve as a partial guide to the selection of a career, more particularly records some ideas which the author has gained during more than a third of a century of association with teaching programs.

All pharmaceutical educators are concerned with three phases of training: first, the preliminary preparation acquired in high school or preparatory school; second, the development of a sound and basic undergraduate program which offers a good basis for direct entry into one of the many vocations open to a trainee in Pharmacy; and third, the use of this sound undergraduate training as a springboard into the advanced programs of specialization in our graduate courses.

The Secondary School Decision

There comes a time in each student's life when it becomes necessary to choose a training for making a living. Among these decisions, one may elect to prepare for a profession—in our case Pharmacy. The earlier the decision comes the better, so that the student may utilize the benefits afforded by his high school programs. Those of us associated with educational training matters have long recognized certain subjects in our high school programs as being most useful in preparing for professional training. It is my opinion that there should be a core of subjects involving 4 years of English and of mathematics, 1 year each of chemistry and physics, 2 years, if not more, of a foreign language with a strong preference given to the educational value of Latin. The remainder of the course should be nonscientific subjects.

There should be consultation with vocational guidance teachers to evaluate the student's success in this program: Can he withstand the rigors of the professional training he contemplates? Has there been a demonstration of some real ability in the sciences and mathematics? Can our prospect assimilate new learning? Is he able and eager to apply himself to the demands of scientific discipline? Is the field of Pharmacy a choice that comes from his heart and his head? If he rates favorably in all of these, experience shows that he probably is suited for college work. In anticipation of the difficulty of adjusting to collegiate training, it would indeed be invaluable if his high school teachers could assist the student (1) to develop good study habits, (2) to train him in taking notes from formal lectures (which could well be added to the modern high school teaching techniques), (3) to acquire the ability to reorganize these notes into meaningful outlines for study, (4) to develop an improved reading comprehension, and (5) to budget his time for study habits and the other demands which are placed upon high school youth.

DR. HAROLD G. HEWITT, Dean of the College of Pharmacy and Professor of Chemistry, University of Connecticut, since 1947, received his education at the University of Wisconsin (B.S. 1923; M.S. and Ph.D. 1926). Dr. Hewitt taught at the University of Buffalo from 1926 to 1947, where he was Professor of Pharmaceutical Chemistry. He is a registered pharmacist in Wisconsin and Connecticut and a Past President of the American Association of Colleges of Pharmacy. Dr. Hewitt was Chairman of the Program Committee of the Fourth Pan American Congress held in Washington, D.C.

Undergraduate Training

No profession has seen more progressive changes in educational requirements during the past half century than has Pharmacy. From 1927, when we required but 3 years of training, through a 4-year program in 1932, to a 5-year course effective not later than April of 1960, we have seen a fundamental change in the philosophy and curriculum content in our schools and colleges of pharmacy. From the earlier era of 'glorified trade-schoolism' to a modern, well conceived program in *training for living*, we have taken many steps in the right direction. Today's program of collegiate training for our profession should bear no more resemblance to that of 25 years ago than the modern streamlined, high-powered automobile does to the old Model T Ford. Thank goodness our ideas regarding pharmaceutical education have changed.

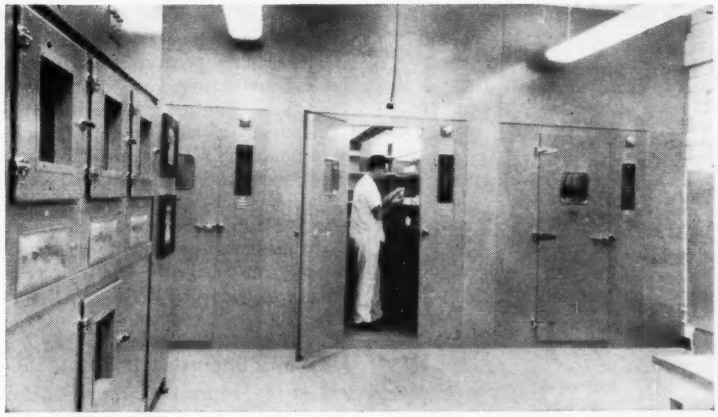
A modern curriculum recognizes the needs for a foursquare training consisting not only of mental development, but the social, physical, and spiritual requirements of the individual as well. The one mistake all too frequently make in professional training programs is to overlook this fact and to cram the time with more and more professional subjects.

In such a program we should recognize the responsibility of educating the individual for living as a useful citizen in modern society, as well as training him in the fundamentals which prepare him for the many vocations within our profession.

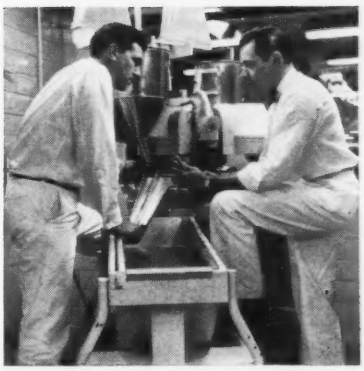
Training for Living

While recognizing the need for physical and spiritual fitness, let us concentrate on the need of the individual to assume his place in society—community or industrial.

The ability to get along with one's neighbors, colleagues or, superiors comes from valuable experiences gained as a leader or, equally as important, as a follower, in extracurricular activities in college. The experience gained in properly conducting a meeting under *Robert's Rules of Order*, the confidence gained in standing on one's feet to present a well organized report, the feeling of pleasure gained through the knowledge of proper social amenities, and the ability to be a good listener as well as an interesting conversationalist, all bring both pleasure and recognition to those who have qualified.



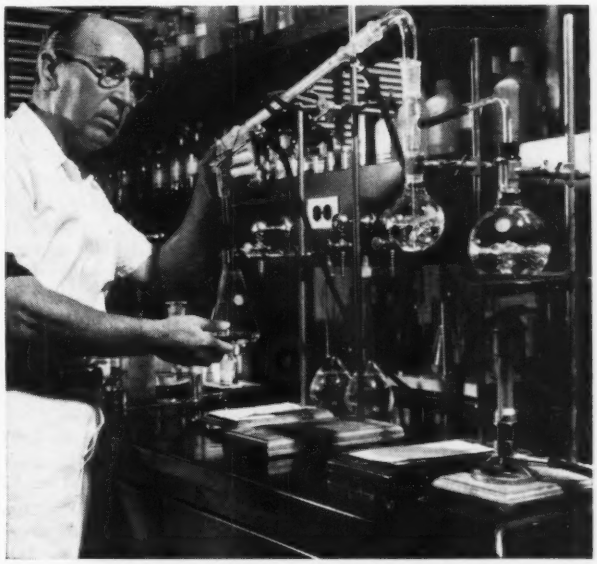
Stability tests on drugs are carried out in specially constructed walk-in rooms in which climatic conditions may be simulated by controlling the temperature and humidity (Ciba Laboratories.)



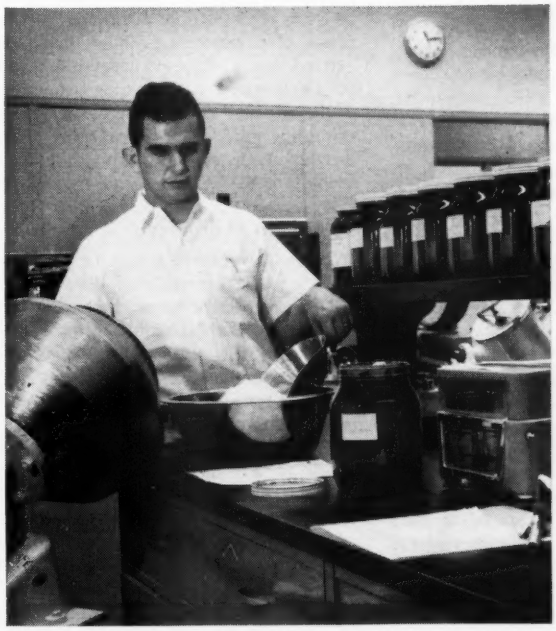
Pharmacists work with chemists, engineers, production personnel in pilot plants (Eli Lilly).

Development

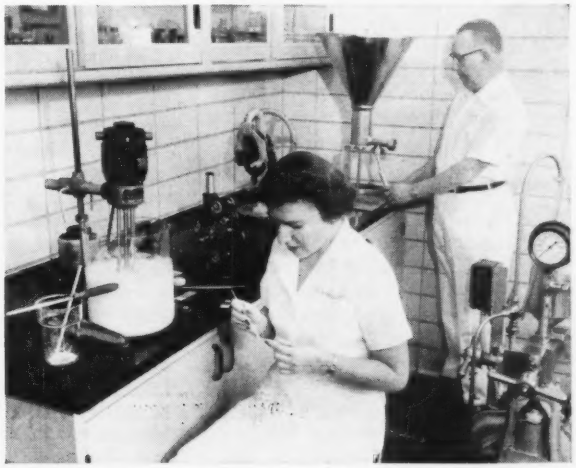
Pharmaceutical development personnel, working with relatively small quantities of a new liquid or solid drug coming out of the research laboratories, devise suitable forms, make stability tests to determine shelf life, and if favorable results are obtained prepare pilot plant quantities so that tests and standards for purity and potency can be developed and clinical tests carried out in the hospitals. ■



A pharmacist who has specialized in analytical chemistry is a valuable person in the research, development, or control laboratories (Wyeth Labs.).



On-the-job training of your pharmacists is the first step in orientation of all new recruits for pharmaceutical development work (The Upjohn Co.).



Pharmaceutical chemists determine the most desirable formulation for a new drug. Here an ointment mixture is being tested (Courtesy S K & F).

Dr. Rudolph H. Blythe[1] reports the industrialists' views concerning the relative importance of course work, research project, and personality of potential employees. Specific courses in training received 46% of the vote, and candidate's personality averaged 36%, while type of research pursued rated only 18%.

How often have you heard a well-known scientist who was such a poor speaker that his report seemed endless and the value of his work was lost in a rambling dissertation. One of the subjects which should be discussed between student and counsellor is the value of a course in effective speaking, as well as the usefulness of courses in logic and report writing. One of the chronic complaints coming from research directors about science graduates is of their inability to turn in a clear, concise progress report showing the results of their research. These men are too busy to wade through lengthy reports—clarity and brevity are essential.

In undergraduate programs these should be offered, through electives, the opportunity to select among the humanities and arts courses that will develop hobbies, and foster the pleasures of reading in nonscientific fields. Blauch and Webster[2] have stated the case well:

"An overload of assigned study allows no leisure for general reading and for the numerous cultural activities found in a college or university atmosphere, many of which make a distinct contribution to the personal and social development of students. To deprive students of opportunities to participate in these means of growth tends to narrow their interests and to isolate them from the cultural life of the time."

Interesting and entertaining guests seem to be invited again to social gatherings and we must not underestimate the value either personally or professionally of such assets. We must recognize that a person may be mentally competent but may be physically, psychologically, or socially unacceptable.

Training for Making a Living

While it is true that the ability to live with yourself, your neighbors, and your colleagues is of great importance, we must recognize the need for training to carry out the art and science of the profession of Pharmacy. Because our profession presents a greatly diversified field, the opportunities are limited only by the nature of the training of the individual and his willingness to work.

It is true that the majority of our students now in training will find their way into retail practice. Some 15% or 20% or more will find their intellectual curiosity challenged more by non-retail careers. The fields of hospital and industrial pharmacy, research, teaching, promotion, and medical sales representatives will serve as attractive vocations. The very nature of so many vocational outlets within our profession makes the building of a curriculum most difficult. Too many programs tend to carry an overload of science which reduces the effectiveness of learning to a pure state of memorization.

Relative Importance of Disciplines

- *Chemistry = 63%*
  - Physical chemistry = 23%
  - Pharmaceutical Organic chemistry = 21%
  - Inorganic chemistry = 9%
  - Analytical chemistry = 4%
  - Biological chemistry = 4%
  - Qualitative Organic Chemistry = 2%
- *Pharmacy = 14%*
  - Manufacturing pharmacy = 8%
  - Dispensing = 2%
  - Physical pharmacy = 2%
  - Research = 2%
- *Biological Sciences = 13%*
  - Pharmacology = 11%
  - Microbiology = 2%
- *Miscellaneous = 10%*
  - Mathematics = 5%
  - Mechanical Engineering = 3%
  - Industrial management = 2%

We must recognize that recent advances in science will bring many new professional opportunities not dreamed of today. We must not build our curriculum on today's demands alone. A good curriculum should provide a comprehensive foundation in the physical sciences along with the social sciences and the humanities. It must be flexible enough so that we may adjust it to meet the changes made mandatory by technological and scientific advances. Candidates must be well grounded in the fundamentals of mathematics, chemistry, physics, and biology with their ensuing or subsequent development in pharmacology, pharmacognosy, biochemistry, and other subjects peculiar to our discipline.

The idea of specialization in a 4-year program is not practical. The demands placed upon us for basic training is severe. I have my doubts as to its practicallity in a 5-year program. It is a mistake to try to anticipate which specialized courses one would need for a particular vocation. Every company which hires our graduates has certain peculiarities and characteristic procedures of its own. These employers constantly remind us of the true value of a rigorous training in fundamentals.

We must avoid inadequate training in basic sciences. I suggest you refer to the article by Dr. R. H. Blythe[1] from which I relate his listing of the importance of the various areas of study. From an industrialist's view he relates the relative importance of various area. of study for employees. See the tables

The training program for any of our professional outlets can be no stronger than the foundation in these fundamental courses. Specialization should be avoided at this stage of training in favor of advanced training in the fundamental subjects, such as more mathematics, advanced organic and physical chemistry, biochemistry, and physics. We must strengthen the basic physical science in our work leading to the baccalaureate degree.

Industrial Internship

Just as supervised internship can prove useful to a future retail pharmacist, so can summer employment in industry serve to bring great benefits to those fortunate to gain such employment.

While it is true that such internships in industrial pharmacy may be quite costly to a company, they will pay great dividends in uncovering talent which can be recruited upon graduation to aid these companies. It would educate the prospective teacher in the field of manufacturing pharmacy to be of real value to his students, and would promote a better understanding of industrial pharmacy among the other segments of Pharmacy.

Library Training

A good knowledge of, and thorough training in, the use of technical literature is as important to a research worker as are his instruments of analysis. Whether done by the individual or in a large company by a trained librarian, it is important that literature searches be done to determine whether a certain phase of a research problem has been carried out and previously published. It is essential therefore that experience in library investigation be carried on in the undergraduate program for those interested in research and industrial employment.

Women in Pharmacy

It has taken some a long time to realize that the profession of Pharmacy is not for men only. It is the ability and not the sex of the candidate that serves to qualify the trainee as a potential pharmacist. In watching the young ladies in training, whether in classroom or in laboratory, I find them more serious, neater in their work, and less likely to ask favors in earning their marks. They are setting very high standards of accomplishment and are a most welcome addition to our training programs. Many schools have been slow in considering them in admission quotas of new students. This is a mistake.

Continued on page 376

[1] Blythe, R. H., *Am. J. Pharm. Ed.*, **21**, 354 (1957).

[2] Blauch, L. E., and Webster, G. L., *The Pharmaceutical Curriculum*, **188** (1952).

[3] Hewitt, H. G., *Am. J. Pharm. Ed.*, **21**, 351 (1957).

Eli Lilly

1958 Remington medalist

DR. ELI LILLY, Chairman of the Board of Directors of Eli Lilly and Company, has been selected by the Past Presidents of the AMERICAN PHARMACEUTICAL ASSOCIATION to become the recipient of the 1958 award of the Remington Honor Medal. He will be the 35th recipient of this medal which was established by the New York Branch of the AMERICAN PHARMACEUTICAL ASSOCIATION in 1918, to be presented annually to the individual who has done most for American Pharmacy in the previous year, or whose continuing contributions to the advancement of the profession over a period of years have been most outstanding. The jury of award consists of the past presidents of the AMERICAN PHARMACEUTICAL ASSOCIATION which numbers 21 at present.

Announcement of the award was made by Dr. Hugo H. Schaefer, Secretary of the Remington Medal Award Committee.

The Committee of Award cited Dr. Lilly's many benefactions to American Pharmacy, American Medicine, and the public health and welfare as significant contributions to the advancement of the profession.

"As head of the pharmaceutical manufacturing firm which bears his name," the committee stated, "Dr. Lilly has given progressive leadership to the research, production, and distribution procedures required to originate, standardize, and bring to the bedside of patients the therapeutic agents of modern medicine. His patronage of the arts and sciences and his abiding interest in human welfare have marked him as a man of many accomplishments, all of which have had a beneficial influence on the standing of Pharmacy among the professions in the health field."

Eli Lilly was born April 1, 1885, in Indianapolis, Indiana. He was graduated from Shortridge High School, Indianapolis, in 1904 and received the degree of pharmaceutical chemist from the Philadelphia College of Pharmacy and Science in 1907.

After his graduation in 1907, Dr. Lilly joined the company which had been founded in 1876 by his grandfather, Colonel Eli Lilly. He was a roving commissioner on efficiency until 1909, when he became superintendent of the manufacturing division. From 1915 to 1920 he was general superintendent. In 1920 he became vice-president, which position he held until 1932, when he was elected president of the company. In April 1948, following the death of his father, J. K. Lilly, Sr., in February, Eli Lilly was advanced to the position of chairman of the board of directors. Now retired from active duties, he remains chairman of the board.

In August 1953, at the one hundredth convention of the AMERICAN PHARMACEUTICAL ASSOCIATION in Salt Lake City, Dr. Lilly was elected honorary president of the association. The election marked the first time the APhA has given its honorary presidency to a father and son. Mr. Lilly's father was similarly honored in 1934. In 1942 Dr. Lilly's father was also the recipient of the Remington Medal.

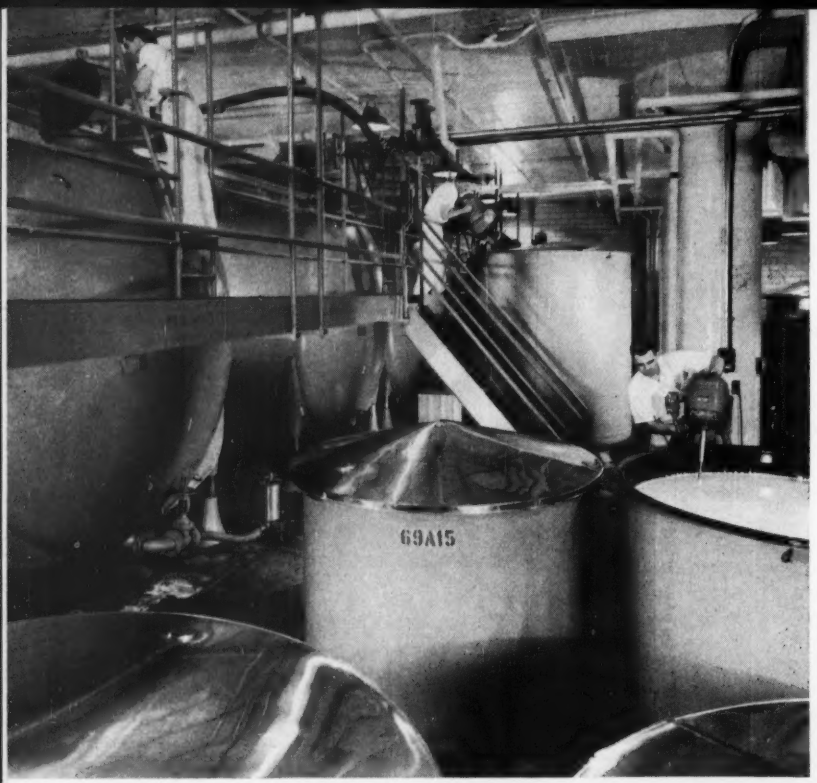
Dr. Lilly is a member of the AMERICAN PHARMACEUTICAL ASSOCIATION; American Chemical Society; Indiana Historical Society (president, 1933–46); Indiana Academy of Science (president, 1938); Phi Delta Chi, professional pharmacy fraternity; American Anthropological Society; and the Military Order of the Loyal Legion of the United States. He is a director of the American Foundation for Pharmaceutical Education, Indiana Manufacturers Association, Indianapolis Foundation, and the English Foundation. An honorary member of Phi Beta Kappa (honored in 1939 at DePauw University), he is also a fellow of the Rochester (N.Y.) Museum of Arts and Sciences. He is a trustee of the Purdue Research Foundation and Wabash College and is senior warden of Christ Episcopal Church in Indianapolis. He helped organize the Indianapolis United Fund in 1957 and served as its honorary chairman.

His leading hobbies are archaeology, animal breeding, sailing, Chinese art, and shop work. Dr. Lilly made an extensive collection of Indian relics and prehistoric articles of the Mound Builders, which he presented to the Indiana Historical Society. He is the author of *The Little Church on the Circle*, a history of Christ Church Cathedral, Indianapolis, published in 1957, and *Prehistoric Antiquities of Indiana*, published in 1937 by the Indiana Historical Society. His Conner Prairie Farm, near Noblesville, modern in its agricultural pursuits, is a historical restoration of William Conner's farm of 1823.

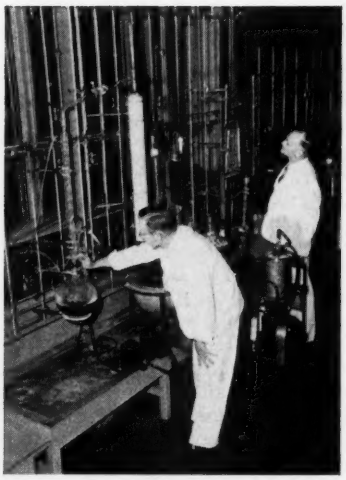
Dr. Lilly has been awarded the following honorary degrees: Pharm. M., Philadelphia College of Pharmacy and Science, 1935; LL.D., Wabash College, 1938; Litt.D., Butler University, 1940; D.C.L., University of the South, 1940; D.S., Transylvania College, 1941; LL.D., University of Kentucky, 1945; D.H.L., Union College, 1948; D.H.L., DePauw University, 1948; LL.D., Indiana University, 1949; LL.D., University of Pittsburgh, 1952; and D.H.L., Kenyon College, 1956.

Dr. Lilly is married to the former Ruth Allison and has one daughter, Mrs. Evelyn Lilly Lutz. His home in Indianapolis is at 5807 Sunset Lane. His summer home is located on the shores of Lake Wawasee, Indiana. ■

Opportunities



Many pharmacists are stimulated by immense mass production equipment used to prepare large quantities of liquid medicinals.



Organic chemical research requires men with a broad knowledge of molecular structure.

Teamwork in pharmaceutical research and development is demonstrated by the conferences among pharmacists, other scientists, and administrators.

WHEN the pharmacy graduate "enlists" in the health team, he (or she) faces serious—and seldom easy—decisions. What "branch of service" he selects can radically alter the course of his life. Few people in any walk of life give as penetrating a consideration to choosing a career as they should, and one of the reasons is that we face our Rubicons with woefully inadequate information.

Time and again pharmacy students have peppered the author with questions about the industry. Their fundamental understanding of this mammoth professional enterprise is usually shaky, for the simple reason that a large percentage have been intimately exposed to the world of retail pharmacy through apprenticeship, but have been exposed only fleetingly to the world of industry through occasional plant tours.

It would be wrong to proselyte for the industry, to "sell" it in contrast to the independence of a career in retail pharmacy. Obviously, each has its own advantages and disadvantages. But the fascinating and growing range of opportunity in industrial pharmacy demands attention, and this article is designed to examine it in some detail.

Questions from pharmacy students usually come down to such things as: Will I don a white coat or a white collar—or both? Will my work be creative or routine? Are my income opportunities limited or large? Just what does the pharmaceutical industry have to offer? The answer is: It depends somewhat upon the industry, more upon the company, and mostly upon you, the individual.

Industrial pharmacy today reflects the sweeping advance of medical science and the drug industry. Breakthroughs are the order of the day, they are the result of intense research, and they reward the companies appropriately for the research they are doing. A one-and-half billion-dollar industry, it spends over $125,000,000 a year on research.

In this gargantuan enterprise, where does the industrial pharmacist stand? Obviously his importance varies by company, but in general his role is growing and provides greater opportunities than ever before.

Data show—and this should be fairly obvious—that the pharmacists in drug houses are clustered in a few islands of activity—pharmaceutical research, control, production and sales (i.e. professional service). But, significantly, they are spreading out beyond these islands into the broader reaches of our growing organizations. Undoubtedly the 5-year course, with its greater breadth for the student, will help him spread his wings. It is possible that this breadth will convince more and more of the industry that training in pharmacy is a unique and valuable foundation for

A scientist long active in industrial pharmacy, Dr. Rudolph H. Blythe, drawing on his own personal experience, reviews in detail the

...ties pharmacists in INDUSTRY

DR. RUDOLPH H. BLYTHE, Director of Pharmaceutical Research, Smith Kline & French Laboratories, received his Ph.C. (1931) from Albany College of Pharmacy and his B.S. (1932) and Phar. D. (1934) from Columbia College of Pharmacy. He has worked in various phases of Research and Development at SKF, since organizing the Pharmaceutical Research Section there in 1934. He is a registered pharmacist in New York and Pennsylvania, and has been active in the affairs of the APhA. He is the author of numerous papers on pharmaceutical subjects. He has been granted patents on various new dosage forms and was the 1950 Ebert Award winner. One avocation is vocational guidance.

personnel throughout the organization. Thus, opportunity is expected to keep pace and even accelerate beyond the dramatic growth of the industry. But the pharmacist who nurtures such hopes must remember that the further he gets from straight pharmacy work, the more he must be able to match the performance of "specialists" in other fields.

The latest and best data on the present and anticipated employment of pharmacists in industry are contained in Table I, which was obtained in a recent survey by the Committee on Graduate Programs of the American Association of Colleges of Pharmacy.[1]

The detailed report (to be published this fall in the *Am. J. Pharm. Educ.*) will show that the large demand for men with the B.S. degree in analytical work is in regular analytical control, and that those with a Ph.D. degree in this area generally devote their time to development of new methods or to supervisory duties.

It will also show that approximately two-thirds of the opportunities in Research and Development are specifically in pharmaceutical formulation work with the remaining third being divided among pharmacology, organic chemistry, biochemistry, or administrative duties.

In the third category of Table I, Production and Manufacturing, the pharmacist's responsibilities usually involve some level of supervision of the compounding or packaging operations.

The pharmacist usually reaches the other jobs shown in Table I (involving purchasing, general administrative work, etc.) by transfer rather than going directly into them after graduation.

Another point to consider is that companies differ. Their use of pharmacists in various operations may vary according to the nature of their business (specialties, physician supply, etc.), and is influenced by the personal preferences of department heads. Some may prefer pharmacy-trained people, while others may lean toward chemists or members of other disciplines. (See Figure 1, taken from a survey made by Schneller.[2] It is well to keep these idosyncrasies in mind when surveying potential employers.

Just what are the attributes of the pharmacy-trained individual that might persuade industry to fit him into a broader picture than the pharmacy or control lab? Certainly he uniquely combines technical and business training. Beyond this he is apt to possess strong analytical and "humanophilic" personal characteristics. It is difficult to pin down survey-type data on how the whole industry has made use of such qualities, but Table II shows the jobs and educational level of pharmacy-trained men in one company.[3] It is believed that an equally broad spectrum of positions is held by pharmacists in other companies. One will recognize that those who are in the highly specialized technical areas of chemistry and biologic sciences have Ph.D. degrees, while most of those in administrative and less technical areas are men with B.S. degrees.

What are the jobs in industry?

The quizzical student or the pharmacy graduate about to enter industry is not satisfied to know that "there is opportunity." He wants to know *what* opportunity. To describe the jobs is a heroic assignment which this article will attempt only briefly. But some detail may help put the inquirer onto the right track. The particular job titles used here stem from the author's own experience, but under equivalent labels the jobs can be found throughout the industry.

Research Division Functions

In *Pharmaceutical Research*, the job is to prepare compounds in pharmaceutical forms which are efficient, stable, and well accepted by patients. Duties include creating new forms for established drugs, designing stability experiments and evaluating their results, and helping to plan the development of a product with other laboratory people as well as with promotional and production personnel.

In *Analytical* work, both research and control, the job is to assay compounds for composition and purity. Duties include developing methods of analysis and working with specialized analytical instruments.

In *Organic Chemical Research*, the job is to create new compounds of potential medical value. Duties include synthesis of entirely new structures, modification of existing compounds, and theoretical work on the relation of structure to function.

In *Pharmacological Research*, the job is to test compounds for physiological action and safety. Duties include development of animal testing procedures, screening new compounds from the chemical laboratories for specific activity, and checking for toxicity.

In *Science Information*, a field of growing importance as the volume of scientific reports and data multiplies, the job is to provide pertinent published information to other sections of the company. Duties include searching literature, preparing clear, concise summaries of the information gathered, and in some cases working on teams with laboratory and medical scientists.

In *Medical Correspondence*, the job is to answer technical questions from physicians and others. Duties include digging up answers to tough questions

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* All photographs shown in this article have been supplied through the courtesy of Smith, Kline & French Laboratories, Philadelphia, Pa.

[1] Report of the Committee on Graduate Program, presented by Dr. J. E. Christian before the American Association of Colleges of Pharmacy at its Los Angeles meeting on April 21, 1958. To be published in the *Am. J. Pharm. Educ.*

[2] Schneller, G. H., THIS JOURNAL, **14**, 156 (1953).

[3] Hager, G. P. and Blythe, R. H., *Drug Topics*, **101** (24), 52, Nov. 25 (1957).

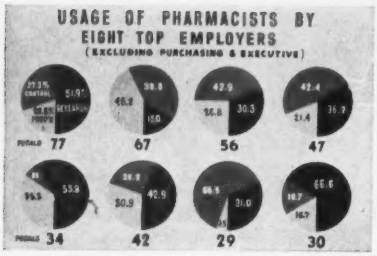


Fig. 1.—Diagram showing variation in demand for pharmacists according to type of work.

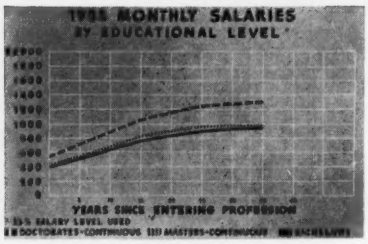


Fig. 2.—Graph showing that average salary levels increase according to the level of education.

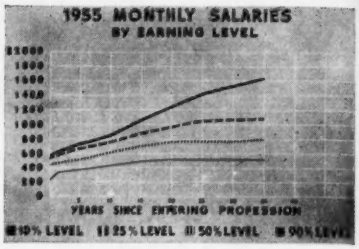


Fig. 3.—Graph showing higher salary levels are influenced by individual experience and ability.

by consulting the literature, or by talking to physicians, scientists, or production people. Obviously the ability to write clearly is essential.

In *Research Administration*, the job is to help coordinate activities of departments involved in developing a new product. Duties include keeping track of and reporting on work being done by laboratory, medical, and science information people, and acting as liaison between technical and business personnel. The man who likes detailed planning and compiling reports is the one best suited for this job.

Manufacturing Division Functions

In *Compounding*, the job is to prepare products in commercial quantities. Duties include carrying out processes, using large equipment, and supervising the preparation of one or more products. Because of the nature of the job, this one is limited to men only.

In *Control*, the job is to guard the quality of the product. Most of the staff is employed in direct analytical work on raw materials and processed material at various stages. In addition, duties include supervision of all quality control aspects of production and calculation and issuance of formula cards.

In *Finishing Supervision*, the job is to coordinate and supervise finishing operations, and includes responsibility for allocation and supervision of a large number of personnel.

General Administration and Promotion Functions

In *General Administration*, the job is to coordinate present operations of all sorts throughout the company and create improved procedures. Men with analytical and administrative abilities can work into such jobs from other positions, although some B.S. men upon graduation can start in this area as trainees.

In *Professional Service*, the job is to advise physicians and pharmacists in regard to the company's products and to promote these products to both of these groups of practitioners. Duties are primarily selling, though the representative may not actually accept orders. Obviously this job requires sales ability and a willingness to travel. Some companies definitely prefer pharmacists for such positions.

In *Marketing Research*, the job is to judge the actual or potential commercial worth of products. Duties include conducting and analyzing surveys in order to judge the efficiency of current promotion, and to suggest new methods of promotion. Ideal candidates for such jobs are pharmacists with an additional degree in business.

Qualifications for Industrial Work

Characteristics expected and factors affecting advancement are very much like those needed in any other job. They include both a sound technical background and the desire and ability to work with others. More specifically, one should have good initiative and the perseverance to follow through; good judgment and a willingness to make decisions; the ability to convey ideas clearly and concisely to others; a sincere interest in working with others; and a willingness, when need be, to submerge one's personal desires for those of the entire organization.

In a survey which asked 14 large pharmaceutical houses what they looked for in Ph.D. personnel, the author[4] found that twice as much emphasis was placed upon the candidate's personal characteristics as his research project, although the greatest emphasis was still upon sound fundamental academic training. The industrial respondents placed 46% emphasis upon specific courses (largely various aspects of pharmaceutical chemistry), 36% upon personal characteristics, and only 18% upon the actual research project on which the man had worked.

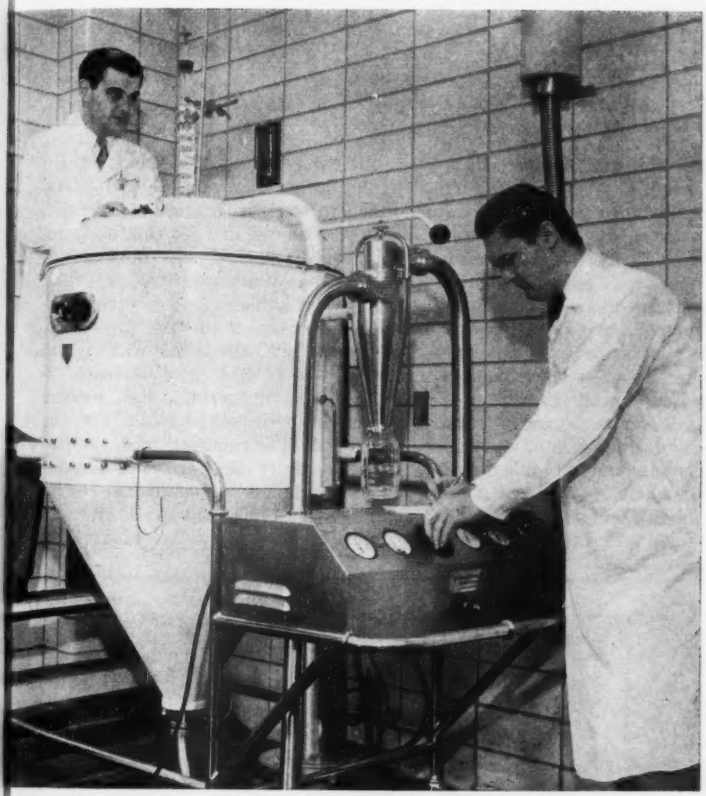
[4] Blythe, R. H., *Am. J. Pharm. Educ.*, **21**, 354 (1957).

TABLE I—Pharmacy Graduate Needs of 35 Major Companies Classified by Type of Work and Educational Level

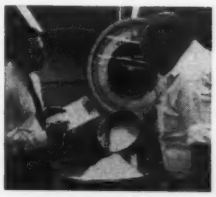
	Presently Employed					Estimated Need for Next Five Years				
	B.S.	*M.S.*	*Ph.D.*	*Total per Type Work*	*% of Entire Total*	*B.S.*	*M.S.*	*Ph.D.*	*Total per Type Work*	*% of Entire Total*
Quality Control and Analytical Work	120	27	18	165	18.9	181	31	28	240	32.8
Research and Development (All Phases)	175	74	122	371	42.6	166	38	106	310	42.4
Production or Manufacturing (All Phases)	169	8	12	189	21.7	113	2	12	127	17.4
Purchasing (All Phases)	15	0	0	15	1.7	5	0	0	5	0.7
Executive[a]	32	0	6	38	4.4	10	0	1	11	1.5
General Admin.[b]	44	5	16	65	7.5	10	0	10	20	2.7
Others	25	3	0	28	3.2	18	0	0	18	2.5
Totals	580	117	174	871		503	71	157	731	
Per Cent of Total	66.6	13.4	20.0		100.0	68.8	9.7	21.5		100.0
Sales[c]	3548	23	2	3573		1331	0	1		

[a] Only top management is included in this category (eg., Presidents, Vice Presidents, and members of the Board of Directors).
[b] Includes those responsible for more than one department or for more than 25 technical personnel.
[c] Sales is considered in a category by itself since these persons work outside the manufacturing and research process.

Pharmaceutical chemists conducting a taste panel on a new elixir preparation. A product must be palatable, release medication uniformly at the best rate, and have a 2-year shelf life as a minimum.

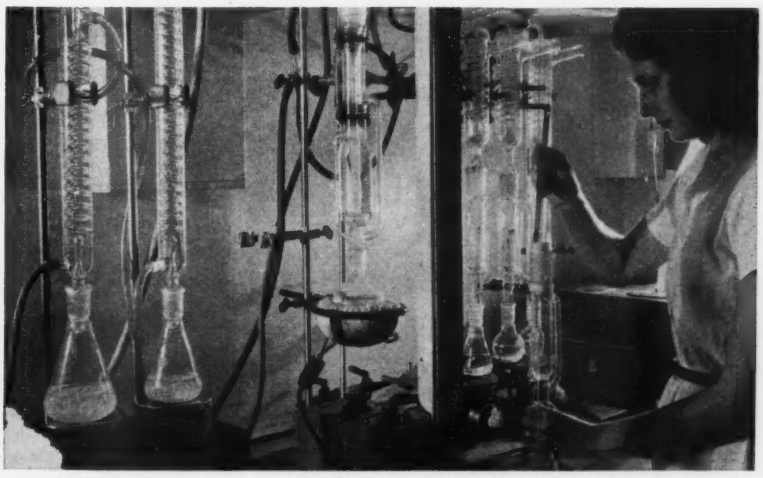


Particle size studies are conducted by pharmacists, during research on spray-drying techniques for a pharmaceutical powder, as one type of study on its physical characteristics.



Weighing of each ingredient must be checked carefully.

In the cardiovascular testing unit, an electrocardiogram is being obtained from a trained dog.



Research in analytical control methods is a field particularly suited to scientifically trained pharmacists with their aptitude for making precise measurements and their scrupulous cleanliness in the laboratory.

If one expects to get ahead, one must do more than is actually required in the job, so that he will have manifested his interest and ability to handle the next higher or another higher job when it becomes available. Because organizations are getting larger, and competition is keen; industrial work is only recommended for the man who is willing to work and who thinks he has the necessary ability. The man who seeks the job merely so he can work the required 35 or 40 hours and have security, will contribute little to the company and will probably be personally unhappy. Because of this, the applicant should concern himself less with the area in which there are the most openings than with the type of work he prefers, for only if he chooses work that he likes will he manifest that extra drive that is necessary for advancement.

On the Job Training

Many students express concern because they wonder how their school work will fit in with what they will have to do in industry. This should not be cause for alarm, for pharmacy, like any other college course, is only intended to give one the fundamental background and the tools with which to work later. The first year or two of work is really a paid internship. One's immediate supervisor becomes his preceptor, showing him how to handle the new job as well as acquainting him with the operations of the company, its policies, and its interdepartmental dependencies. One starts with the simpler operations and gradually learns the more complex ones. Depending upon one's growth with the company, and the organization of the particular department involved, one is quite likely to assume gradually increasing supervisory responsibilities. Many companies encourage and frequently subsidize outside course work at nearby universities.

The above process might be illustrated by the way in which one with a B.S. in pharmacy might become acquainted with formulation work in pharmaceutical research and development. Upon joining an organization, he will be assigned to work with a senior scientist, one who knows how to approach research projects and also understands the company organization. At first, the new pharmacist will be given detailed directions as to what to do. At the same time, the senior will explain the purpose of each step and each ingredient, and why certain substances are chosen in preference to others. The junior will be encouraged to do supplemental reading. Within 6 to 12 months, the junior should be able to make worthwhile suggestions and possibly even submit a program for his supervisor's

Table II—Use of Pharmacists by a Leading Drug Manufacturer

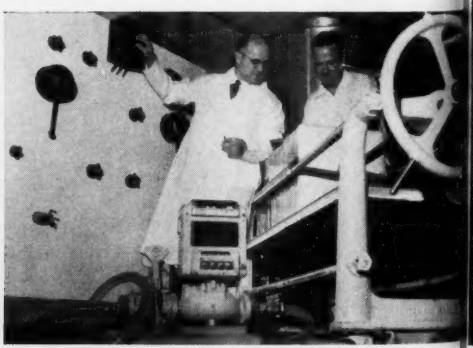
Department or Section	Number Employed	Degree		
		B.S.	*M.S.*	*Ph.D.*
Research and Development				
Pharmacy	43	26	8	9
Biological Sciences	5	—	—	5
Chemistry	2	—	—	2
Production				
Plant Development	8	5	1	2
Processing	6	5	1	—
Finishing	4	4	—	—
Non-Laboratory Positions				
Administration	7	6	—	1
Medical Survey	2	2	—	—
Medical Correspondence	2	2	—	—
Science Information	3	2	—	1
Trade Relations	1	1	—	—
Totals	83	53	10	20

Production

The challenging activities encountered in the production segment of the pharmaceutical industry utilize the many types of talents and abilities developed by pharmacists in the modern curricula of the colleges of pharmacy. Activities include planning, preparation of ointments, liquids, ampuls, and tablets, automatic labeling, and packaging. ■

Powders are being poured into 4800-gallon glass-lined tanks. Liquids are automatically pumped from storage tanks by remote control.

Pharmacists use their know-how in planning production schedules; they coordinate manufacturing, packing, finishing, etc. (Courtesy Eli Lilly).



Pharmacists looking over a filter during the manufacture of a pharmaceutical fluid (A. H. Robins Co.).

consideration. Between 1 and 2 years, the junior should be able to handle simple formulations and interdepartmental liaison work by himself. He may be assigned a technician and later another pharmacist to help him. During this time he will be encouraged to take outside courses in physical, colloid, and qualitative organic chemistry if he has not already had them. This is the road that a junior takes to become a senior research pharmacist. In a similar manner, the energetic, capable pharmacist is given an opportunity to advance in other types of work.

Salary

Starting salaries are relatively standard for persons with B.S., M.S. and Ph.D. degrees, varying somewhat with the area of the country and the cost of living for that area.

The more difficult question that arises is how much is the man likely to be making at some *future* date. Two important factors must be considered. First, the educational level of the man, and second, how his performance compares with that of others doing similar work. Since much more data are available on the salaries of chemists than industrial pharmacists, and since these are generally similar, we have used data from a recent survey by the American Chemical Society[5] in the next two figures.

[5] Fraser, A., *Chem. Eng. News*, **34**, 173 (1956).

Table III—Survey of Monthly Starting Salaries[a]

Degree	Current Hiring Salaries		
	Low	*High*	*Average*
Doctor	600	725	640
Master	408	540	468
Bachelor	350	500	419

[a] From a survey of 10 leading pharmaceutical companies for persons with no industrial experience.

Should I get an M.S. degree? Should I go on to a Ph.D. degree? Looking at these questions from a purely financial viewpoint, the answer seems to be to work for a Ph.D. As figure 2 shows, the person with an M.S. degree will generally earn more than one with a B.S. But, he can expect to make out significantly better for the time and effort invested in his training if he goes all the way to a Ph.D. degree. One caution must again be raised: individual characteristics are vitally important. Some men with a B.S. will have the ability and drive to get ahead so that they will even be supervising men with Ph.D. degrees, as well as earning more than the average person with a Ph.D.

Figure 3 shows the degree to which a man's own ability and effort determine the different levels of earnings he can achieve. The top 10% and bottom 10% are not too far apart at the start of their career. But in terms of *potential*, the top 10%—even the top 25%—accelerate much faster as the years go on and go much higher than the others. Reading beyond the actual charts, one can realize that a few men will be earning over $50,000 per year and others will show very little advance over their starting salary. The man's future, therefore, is dependent upon his own ability and how he uses it.

In addition to actual salaries, the so-called "fringe benefits" amount to as much as 20% of the payroll of some companies. These benefits include medical, hospital and life insurance policies, paid absences during illness, paid holidays, vacations, retirement benefits, convention coverage, etc.

Summary

Industrial pharmacy is a growing segment of the pharmaceutical profession. It offers a wide diversification of technical, sales, and administrative positions. The new 5-year course, with its broadened sweep of academic studies, will encourage industry to expand its use of pharmacy-trained people, recognizing their unique combination of scientific and business training. Competition is keen, but for the individual who would join a progressive team enterprise, the rewards are satisfying both in financial gain and security, and in the all-important sense of accomplishment. ■

Millions of tablets are coated daily in automatic coating pans in which the process, remotely controlled by electronic equipment, is carefully checked by only 4 pharmacists (The Stuart Co.).

Pharmacist adjusts a machine which automatically washes, fills, and seals in pairs 6,000 ampuls per hour (Ciba).

Industrial Pharmacy's

services to retail pharmacy

by Harry W. McNey

AT 2 A.M. one Saturday morning back in 1955, a Pharmaceutical salesman in Connecticut was aroused from sleep by a telephone call. It was the Chief of Staff of the Waterbury Hospital. The town was flooded. Bridges over the Naugatuck River were washed away. The water lines from the reservoirs into the city were broken and the water supply was contaminated. Much of the city was without gas and could not boil water. The Hospital needed typhoid-parathyphoid vaccine and antibiotics and needed them fast.

The salesman checked for possible supplies in local pharmacies. Four of them had been destroyed by flooding. The others had only a limited supply of the materials needed. The wholesaler in the area had been hit hard by flood waters.

Later Saturday morning a call came through from Lederle in Pearl River asking what was needed, and by that night the first of eight airplane flights bringing vaccines, antitoxins, and antibiotics had landed at Waterbury's small air strip.

Help in Disasters

Waterbury struggled through days of danger, but the threat of a typhoid epidemic was averted by mass inoculations and liberal use of antibiotics. Among those who faced economic ruin were the four pharmacists whose stores had been wiped out. A half dozen others were badly hit and large quantities of stock had disappeared in flood waters or had been destroyed.

As soon as the salesman could get around to these stores, he sat down with the pharmacists and determined how much of his company's products had been lost. One store was missing $1,400 worth of these products. Another's loss was $600. In all, about ten stores had substantial losses of the manufacturer's representative's products.

Immediately, the salesman put through orders to replace all these stocks, and credit memoranda were passed at the same time. Other pharmaceutical companies did the same thing. Thousands of dollars in products were replaced free of charge to the stricken stores. Meanwhile, pharmacists who had not been hit handled prescriptions on separate books for the stores that were being rebuilt, and accepted no remuneration from their colleagues.

This episode in Waterbury was duplicated in other, smaller cities in the Naugatuck Valley. In the town of Naugatuck itself, a local pharmacy became headquarters for the distribution of vaccines, antitoxins, and antibiotics. Pharmaceutical companies and their representatives got the critical material through, and the pharmacist, supplied it to the town's doctors.

Mutual Dependence

Pharmaceutical companies realize that the well-being of the pharmacist is essential if the medical team is to function most effectively. Pharmacy and pharmaceutical manufacturing are inseparably joined together, each dependant upon the other for its livelihood. There are sometimes problems between them which resist quick solution, but there are overwhelming areas of mutual benefit and achievement which are far more important.

In 1956 drug stores filled almost $1,500,000,000 worth of prescriptions—about one-quarter of total drug store sales. Ethicals sold over the counter added another $400 million. All together, pharmaceutical products produced almost 32% of pharmacists' total sales volume, and even a greater percentage of their total profits. This is the service that manufacturers render to pharmacists that can be measured in dollars and cents. But the relationship does not end there. In a free society it is squarely up to both groups to build a better public understanding of the parts they play on the health team. This is an area where the manufacturers contribute much to the pharmacists.

HARRY W. McNEY, Director of Marketing, Lederle Laboratories, started with the company as salesman in 1940. Sixteen years later, in 1956, he reached Lederle's top sales post. Along the way, he was successively appointed District Sales Manager (1945), Assistant Regional Manager (1947), Regional Manager (1947), and Sales Promotion Manager (1952). A native of Washington, D. C., Mr. McNey now lives in Hohokus, New Jersey. He has a wife and three children.

Public Relations

The industry and pharmacy are sometimes mysterious things to the public, and even, sometimes, to the nation's doctors. They make their livelihood from the production and sale of material which is necessary for the amelioration of suffering and the saving of human life. The profits they earn enable them to perform this basic job better, by supporting research, by paying for the development of new products which contribute to health, and by providing better pharmacies, offering better service both to the medical profession and the public. The position of the druggist as informed intermediary between the manufacturer and the physician is the basis of his professional reputation.

The ability of a pharmacist to meet the needs of his community is enhanced by his contact with the medical representative of the manufacturer. The "detail man" is the basic building block of the manufacturer's sales structure and is always on hand or on call to help the pharmacist meet a critical problem.

Recently, two cases of botulism were reported in Corbin, Kentucky. Unless antitoxin could be secured promptly, the patient's lives were in danger. The pharmacist in the Kentucky community was called upon by the local hospital to get a supply of botulism antitoxin. A quick call to the manufacturer's sales office in the area brought doses of the rare antitoxin from great distances within twelve hours. This pharmacist's knowledge of his job, together with the effective back-stopping by the antitoxin manufacturer, certainly enhanced the reputation of his pharmacy in the public eye.

Other ways for pharmaceutical companies to help the pharmacist to build a favorable public image of his function are not so dramatic. These methods occupy much of the day-to-day activity of the manufacturer's sales and advertising staffs. Once again, the salesman is the basic building block. He is responsible for bringing prescription business into the pharmacy at a level consistent with the merits of his company's products. He sees to it that the pharmacists in his area have full information on new products and that they have any advice or help they require. He helps keep the pharmacist's catalogue up to date, and keeps him in touch with the "feel" of the pharmaceutical manufacturing industry. Where a close relationship exists between the pharmacist and the salesman, each becomes more productive.

The relationship the pharmacist has with his community is an important factor in his success. Pharmaceutical

manufacturers have increasingly gone out to help pharmacists and their local, state, and national organizations, to bring their story to the medical profession and to the general public. Various manufacturers have provided speeches and radio scripts to pharmacists and their organizations, have urged them to use these tools to convey their aspirations and achievements to their communities. Unquestionably more of this work will be undertaken by the manufacturers in the future. Just recently, a study of public relations activities by the state pharmaceutical associations was carried out by the author with the support of his company to form a reservoir of information for all the state associations which could help them solve their public relations problems. The publications of a number of pharmaceutical companies are instrumental in keeping the pharmacist informed the potential his business has and of the pitfalls it may encounter.

Product Promotion

More than in most industries, the advertising load in the pharmaceutical industry is carried by the manufacturer. Because the ethical pharmaceutical products cannot be advertised to the general public, the manufacturer must produce and pay for the advertising and promotion which will bring prescription business into the pharmacy. Most ethical pharmaceutical companies spend about 5% of their total sales to inform the medical profession about their products. The pharmacist is not asked to spend a dime on promotion of ethical products, while the sale of these products accounts for the biggest single portion of his profits.

Pharmaceutical journals, an essential channel of information for pharmacists, are supported in a large degree by the advertising revenue of the pharmaceutical manufacturers. This function of advertising, not by any means confined to the drug industry, is sometimes forgotten when advertising is criticized. Without the advertising revenue provided by manufacturers, the dissemination of vital technical and business information provided by the drug journals and by the medical journals as well would be reduced considerably.

Economic Aids

Most ethical pharmaceutical companies have tried to keep ethical products in the licensed pharmacies. They are in sympathy with fair trade, and realize the plight of the small pharmacies when they are faced with a price-cutting situation. They support the efforts of the retail pharmacist to keep his economic head above water. At the same time, the manufacturers are conscious of the criticism aimed not only at themselves but also at the pharmacists about the price of prescriptions. There are good reasons for the rise in prescription costs, as eveybody in the industry knows. The manufacturers are taking the lead in explaining increased prescription costs to the general public. Their support, for example, of the Health News Institute, is a service not only to themselves but also to the pharmacists of the country. The HNI acts as one of the industry's watchdogs, and does an able job of defending it against unfair attack.

Research

One of the reasons why the pharmaceutical companies and the pharmacists have prospered in recent years is pharmaceutical research. Manufacturers last year spent an estimated $127,000,000 in research aimed at producing new and better drug products. Much of this money will not result in major new products. Some, it is hoped, will. As new breakthroughs in health are made, the services of each member of the health team become more valuable.

Antibiotic sales have grown from about $112,000,000 in 1947 to almost $270,000,000 in 1956. The new steroid field has grown from its birth only seven years ago into an $80,000,000 segment of the industry. Whatever chemical "miracles" the drug industry comes up with, it will be its purpose to market them primarily through the wholesale and retail pharmacies. In 1954, of the total value of all shipments of products from all drug manufacturers, 78% went to wholesale and retail pharmacists in this country. Only 3% went to federal and state government agencies, and only 8% went directly to doctors, hospitals, veterinarians, and so on. (The other 11% went out of the country or were intercompany sales of bulk products.) The American pharmacists are clearly the cornerstones of drug marketing.

Personal Support

The pharmaceutical company is sometimes thought of as a vast, machine-like organization made up of cold laboratories and impersonal businessmen. This is far from the truth. Many pharmacists, such as those in Waterbury, Connecticut, can give personal testimony to the individual help they have received from the companies and their representatives in time of trouble. When a pharmacist becomes ill and cannot tend his prescription counter, many a salesman has come in after his day's work is done and volunteered to pitch in with the job. And when severe illness or death has come to a pharmacist, credit extending over many months has been given to his store, so that it could remain in operation during the critical days.

An emergency shipment of typhoid vaccine is delivered by plane to Naugatuck pharmacist Geo. Donovan during a Connecticut flood.

About the future of Pharmacy, industry has no doubts. It is giving active support to creating a more professional status for pharmacists. It supports with effort and money the creation of a pharmacy internship program both in the hospitals and in retail pharmacy operations. It supports research in Pharmacy, which will add stature and dimension to the role the pharmacist plays on the medical team. It contributes to pharmacy schools and to the program to increase professional training for the pharmacy student.

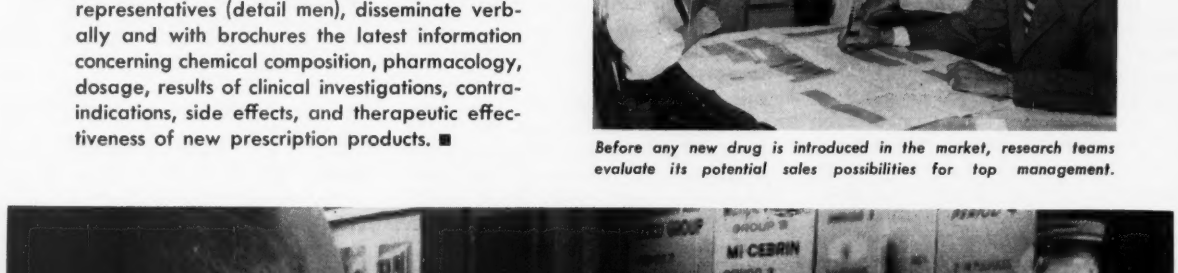
Someone took out his crystal ball recently and peering 25 years into the future saw a $4,250,000,000 retail prescription market by 1983. That would be a tripling of today's market. The figure is astonishing but in view of the developments of the past twenty years, it is perhaps not too far-fetched. Pharmaceutical manufacturers want to help pharmacists solve the hard, sometimes irritating, problems that this kind of growth presents. Both groups must continue to make human health their first objective. Then both will share in whatever rewards society sees fit to confer. ■

Frank Calvo, owner of the Chase Park Pharmacy, Waterbury, Connecticut, takes inventory of his flood-damaged store with William Huber, of Lederle Laboratories.

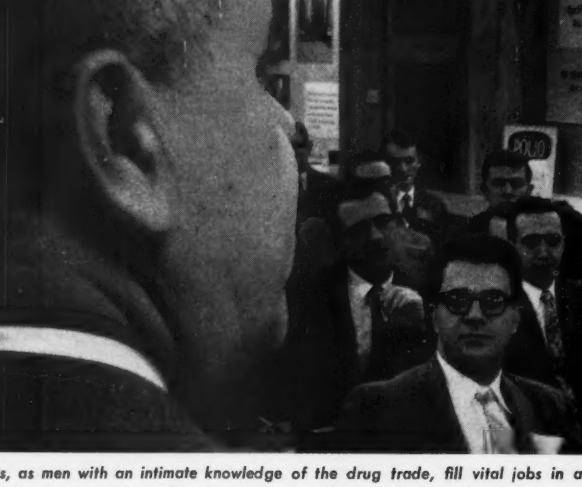
Promotion

Pharmaceutical promotion and sales personnel, with the aid of advertising executives and agencies, and through personal contacts among pharmacists, physicians, and pharmaceutical representatives (detail men), disseminate verbally and with brochures the latest information concerning chemical composition, pharmacology, dosage, results of clinical investigations, contraindications, side effects, and therapeutic effectiveness of new prescription products. ■

Before any new drug is introduced in the market, research teams evaluate its potential sales possibilities for top management.



Pharmacists, as men with an intimate knowledge of the drug trade, fill vital jobs in advertising, promotion materials, and other marketing departments. Periodically the representatives of each company are brought in from the field to headquarters for training and briefing on new developments (Eli Lilly).



A pharmaceutical representative works closely with the pharmacist to make certain his stock is in order, his displays attractive (Upjohn).

Pharmaceutical representatives spend 90% of their time interviewing physicians to acquaint them with new products.

How to train a

salesman for pharmacy

by George C. Straayer

AT the 1954 Convention of the AMERICAN PHARMACEUTICAL ASSOCIATION in Salt Lake City the subject, "Your Salesman for Pharmacy" was discussed. The point was made that approximately 15,000 representatives traveling for the pharmaceutical manufacturers of our nation are actually salesmen for our profession. In this article is discussed the training program that one pharmaceutical manufacturer has established in order to make certain that the men who are representing the pharmaceutical manufacturers in the physicians' offices, the hospitals and clinics, and in the pharmacies of our nation are adequately equipped for the task. (The program outlined here is representative of the industry.)

After careful screening and interviews by several members of sales management and frequently an aptitude test, the candidate is employed and put into the hands of a field trainer or field supervisor for a week or two of "on-the-job" training. This initial training period is very important inasmuch as it includes indoctrination into the company as well as a complete step-by-step study of the job description of the professional sales representative; also a comprehensive review of the company policy as outlined in the Sales Manual, and some actual sales calls. During the first week the calls are made with the trainer or supervisor doing most of the talking, while in the second week the new salesman takes over under the guidance of his senior. After each call, or at the end of the session, "curb conferences" are held for review and constructive criticism.

Following the second week the new salesman is sent "on his own" into his territory, depending upon his own initiative and ability with guidance only in the form of written correspondence from his field manager, supplemented by the regular home office mail. He is usually "picked up" after two or three weeks working in his assigned territory for another two or three days of field training, when any problems encountered are reviewed and additional guidance provided by the assigned trainer or supervisor.

After several months (usually a minimum of six) when the supervisor has determined that the new salesman has the potential to develop into a top notch sales representative, he is brought into the home office training class. This consists of a three-week session under the direction of the Sales Training Manager. The group of 15 or more salesmen receive lectures from the medical and research staffs, members of sales and corporate management, and also take part in role playing and conference type sales training classes.

After the sales representative returns to his territory, he receives the benefit of additional training through the media of printed sales material. In some companies, he regularly receives mailings from the Research Institute of America as a result of membership in the organization, special sales training correspondence courses, subscriptions to national medical and pharmaceutical journals, and a tailor-made publication for the sales staff such as *The Detailer*. In addition, each salesman receives his monthly "SPEC" kit containing instructions for the monthly detailing program and a sample of each reprint and piece of literature being mailed during the month, and regular product bulletins presenting the latest "benefits" to be discussed with physicians, dentists, nurses, and pharmacists.

At least once a month each sales representative attends a division or subdivision sales meeting. Members of the Home Office sales management, market research, and clinical staffs present the latest word on products and progress, and the meeting serves as a refresher training course.

Every sales representative's progress is reviewed annually by his supervisor or manager. This evaluation includes review of over-all self-improvement rather than sales progress only. Public speaking, effective selling, speed reading, and writing and language courses are often suggested—or a reading program of sales books and other texts outlined. Progress reports are then scheduled at regular intervals.

After five years in the field the salesman is brought back to the office for a one-week senior salesman training course, at which time he is brought up to date on company progress, the latest techniques in detailing and selling, plans for the future, and has an opportunity to tour the physical facilities and renew acquaintances with members of Home Office management.

As part of his routine daily activities the sales representative attends medical conventions at which his company exhibits, and spends time visiting with Home Office executives as well as members of clinical or market research staffs who are touring the country. These occasions also provide opportunity for being made completely aware of the latest developments in his field.

"The Salesman for Pharmacy," therefore, is a well-trained person. He is equipped to carry on his task which is laid out for him in his job description. Through his routine correspondence and regular visits by his manager or supervisor he is encouraged to study and carry out a self-development program. He is regularly motivated and encouraged by new programs, contests, and marketing challenges.

All of the training is pointed in one direction—to create a greater market for prescription products which are to be dispensed through the pharmacies of America. He is truly a well-trained "Salesman for Your Pharmacy." ■

GEORGE C. STRAAYER is Director of Professional and Trade Relations of Schering Corporation, Bloomfield, N.J. His experience includes 18 years in sales, sales training, and public relations with Schering and several years as a retail pharmacist in Michigan. From 1943 to 1955, Mr. Straayer, in his capacity as head of the field staff, was in charge of selection and training of the entire professional sales staff. He received his B.S. in Pharmacy from Ferris Institute, Big Rapids, Mich., in 1937.

Economics

by Richard R. Dier

New Records Scored by Drug Industry

Indications that the drug industry has not been hurt by the general business recession are first quarter 1958 reports of 5 major pharmaceutical manufacturers on record sales and earnings.

Preliminary sales figures for Abbott Laboratories show a 12.5% increase over the same period last year.

Merck & Company reports a sales increase of about 12.0% and net income rise of 14.0%.

Parke, Davis & Company reports a 13.5% increase in net sales and a 27.5% increase in earnings.

Charles Pfizer & Company reports sales of $53,779,115 for the first quarter of 1958, compared with $50,703,614 for the same period last year. First quarter earnings increased 19.0% from 1957.

Smith, Kline & French Laboratories report net sales of $30,668,423 compared with $27,277,299 for the first 3 months of 1957. Net earnings after taxes reached $5,037,454, compared with $4,668,910 for 1957.

In reviewing the financial growth of the drug industry, we should be aware of the fact that it is still a small industry compared with the giants of American business. General Motors' pretax income in 1957 was approximately $1,600,000,000, which is equal to total estimated ethical drug sales in 1957.

Women Dominate Buying Habits

Approximately 73.3% of all purchases of drug and toiletry products, excluding prescriptions, are made by women. Woman is the dominant customer, the initiator of purchases, and also the brand decider.

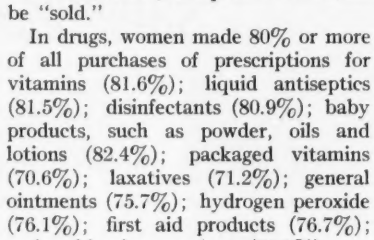
These facts are revealed in a recently published study conducted for *McCall's Magazine* by the Home Testing Institute. The report, "McCall's Drugs & Toiletries Purchase Diary Study," is a nation-wide survey of the American family's buying pattern and of the influence exerted by various members of the family in drugs and toiletries.

Particularly significant is the fact that women initiate 70.6% of the purchases and make the brand decision 69.3% of the time. This spotlights the "real" customer, the person who must be "sold."

In drugs, women made 80% or more of all purchases of prescriptions for vitamins (81.6%); liquid antiseptics (81.5%); disinfectants (80.9%); baby products, such as powder, oils and lotions (82.4%); packaged vitamins (70.6%); laxatives (71.2%); general ointments (75.7%); hydrogen peroxide (76.1%); first aid products (76.7%); and oral hygiene products (77.0%).

In toiletries, women made approximately 90% of all purchases.

Chart I—Distribution of Families by Income



Source: "Economic Growth in the U.S.: Its Past and Future" issued by The Committee for Economic Development, 711 Fifth Avenue, New York 22, N.Y.

Most buying in drugs is planned, with impulse playing only a small role. In toiletries, impulse is somewhat more pronounced but still remains a minor factor. An analysis of the buying habits which underscores the dominant role of women is shown in the tabulation at the bottom of this page.

Family Incomes Increase

Over the past decade the average income of American families has risen by $2,000, from $4,130 in 1947 to $6,130 last year. This represents an increase of almost 50% for the 10-year period, according to the U.S. Department of Commerce.

If adjustment is made to express the incomes in terms of dollars of 1957 purchasing power, the rise in average real income was slightly over $1,000 for the decade. This still represents an increase of about 20% in average family purchasing power since 1947.

According to a report, "Economic Growth in the U.S.; Its Past and Future," issued by the Committee for Economic Development, there has been a significant reduction in inequalities of income since 1929. Not only has average family income advanced but far more families now have good incomes than in 1929.

In the 27-year period 1929–1956, the number of families with disposable income (income after taxes) below $2,000 fell from 12,900,000 to 8,300,000. Those with incomes between $2,000 and $4,000 remained about the same; and those above $4,000 rose from 9,200,000 to 30,900,000 (See Chart I) to the left.

The Tax Burden

The tax load on every man, woman, and child during fiscal 1958 will total about $658, according to The Tax Foundation. This compares with $640 in fiscal 1957 and $608 in 1956. Of the 1958 taxes, $468 will go to the Federal Government, $101 to state governments, and $89 to local taxing authorities.

These figures indicate the heavy taxes imposed upon every individual in order to effectively operate all types of governmental machinery.

Medical Care Cost Index Rises

The medical care cost index rose 0.3% in March 1958 and reached a new high of 142.3. This last figure compares with 136.4 in March 1957; 105.4 in June 1950; and 72.6 in 1939 (1947–49 equals 100). The rise in medical care costs resulted from higher prices for prescriptions and drugs and for hospital and professional services, according to the U.S. Bureau of Labor Statistics.

Business Failures Continue Decline

Only 34 retail pharmacies failed during the first 3 months of 1958, compared with 43 for a like period last year. Most other retail industries showed an increase in failures, according to *Dun's Review & Modern Industry.*

	Who Bought	Whose Idea	Who Determined the Brand
Women	73.3%	70.6%	69.3%
Men	21.7%	20.6%	20.9%
Children under 20	4.8%	6.7%	5.7%

Straight from Headquarters

Change in Medicare Drug Payment Policy

Continued from page 355

Law. The Committee also recognizes that serious administrative difficulties have arisen and, therefore, reasons as follows:

WHEREAS, neither the Law nor the Directive governing the Dependents' Medical Care Program made provision for furnishing drugs for authorized outpatient care;

WHEREAS, the present policy is benefitting only approximately 14% of the maternity patients receiving maternity care in the program;

WHEREAS, the patients may obtain drugs at no cost to themselves at Uniformed Services medical facilities, if needed drugs are available;

WHEREAS, a marked diversion of opinion exists concerning the policy among physicians, pharmacists and their representative associations; and,

WHEREAS, the present policy creates additional expense which would be further increased under any other proposed method of administration,

BE IT, THEREFORE, RESOLVED:

That the present policy of furnishing drugs to authorized outpatients under the Dependents' Medical Care Program be discontinued at a date to be determined by the Executive Director and that efforts continue to be made to accumulate information concerning hardships which this change of policy may bring to patients which may later be used to determine the advisability of future legislative action if deemed advisable.

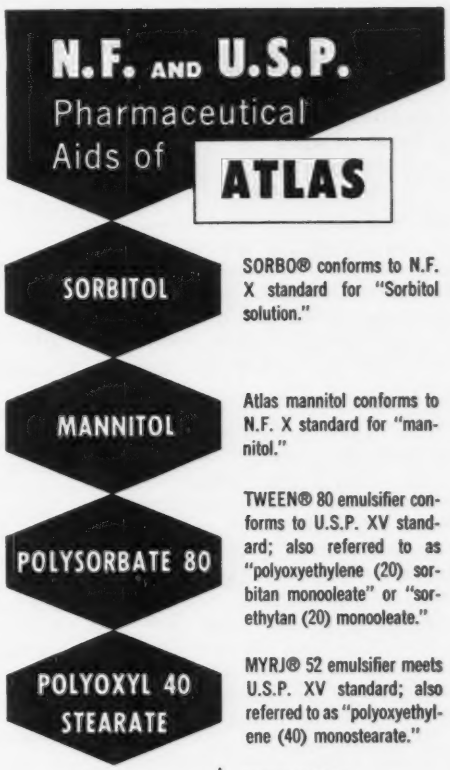
That nothing in this resolution be interpreted as in any way affecting the furnishing of drugs to authorized inpatients in hospitals or to necessary parenteral administration to authorized outpatients.

Revised Procedure Effective July 1

The directive issued by the Executive Director of the Office of Dependents' Medical Care, effective July 1, 1958, states that:

1. Payment for oral medication dispensed or prescribed by physicians providing care authorized under the Medicare Program to eligible dependents will be the responsibility of the patient or sponsor and will not be compensable to physicians under the Medicare Program.
2. Physicians furnishing authorized care to eligible dependents under the provisions of the Dependents' Medical Care Act may include the cost to them of those drugs which they administer parenterally, provided such drugs are necessary and directly related to the condition for which authorized care and treatment is being furnished.
3. In order for a physician to obtain reimbursement for any drug administered parenterally, he must identify the nomenclature and quantity of the drug and set forth the cost thereof to him on the claim form or attachment. No service or breakage charge is payable.
4. Claims received on or after 1 July 1958 for drug items furnished prior thereto may be paid in accordance with the policy in effect prior to that date.
5. The policy authorizing the furnishing of drugs to hospital inpatients remains unchanged.
6. The policy to the effect that an additional amount is not payable to a physician or surgeon who furnishes his own anesthetic equipment or materials will continue in effect.
7. Medicare patients may continue to obtain medication from pharmacies of uniformed services medical facilities upon prescription of a civilian physician if the items prescribed are available there or they may obtain such medication from civilian pharmacies at their own expense.

It should be noted that under the new policy physicians will not be paid by the Government for drugs distributed to Medicare patients. Pharmacists, therefore, will be in the position of being paid directly by the patients for such drugs as are being prescribed for them. Medicare patients may, of course, obtain drugs from armed services pharmacies without charge as before. ■


N.F. AND U.S.P.
Pharmaceutical
Aids of
ATLAS
SORBITOL
SORBO® conforms to N.F. X standard for "Sorbitol solution."
MANNITOL
Atlas mannitol conforms to N.F. X standard for "mannitol."
POLYSORBATE 80
TWEEN® 80 emulsifier conforms to U.S.P. XV standard; also referred to as "polyoxyethylene (20) sorbitan monooleate" or "sorethytan (20) monooleate."
POLYOXYL 40 STEARATE
MYRJ® 52 emulsifier meets U.S.P. XV standard; also referred to as "polyoxyethylene (40) monostearate."

These adjuncts, and also the well known SPAN® and ARLACEL® (sorbitan fatty acid ester) emulsifiers, and TWEEN® (polyoxyethylene sorbitan fatty acid ester) emulsifiers, are available for extemporaneous compounding from the following suppliers:

Boston 4, Mass.
Gilman Brothers, Inc.
100-112 Shawmut Ave.

Cincinnati 6, Ohio
Hill Top Research Institute, Inc.
921 Wm. Howard Taft Road

Los Angeles 22, Calif.
Mefford Chemical Co.
5353 Jillson St.

New York 11, N. Y.
Ruger Chemical Co.
205 W. 7th St.

San Francisco 19, Calif.
Braun-Knecht-Heimann Co.
1400 16th St.

Seattle 4, Wash.
Van Waters & Rogers, Inc.
4000 First Ave., South

Wilmington, Del.
Laboratory Center, Inc.
919 Washington St.

Portland 10, Ore.
Van Waters & Rogers, Inc.
3950 N.W. Yeon Ave.

CHEMICALS DIVISION
ATLAS POWDER COMPANY
WILMINGTON 99, DELAWARE
Atlas Powder Company, Canada, Ltd., Brantford, Ontario, Canada

★*Advt. No. 9058-CA—1/2 page—Journal of American Pharmaceutical Association—April, 1958*

Federal and State Actions

FDA ACTIONS

Illegal Over-the-Counter Sales for the Month of April

Clarence R. Duff, t/a Duff's Drug Store, Harry N. Chastain and Hugh E. Lumpkin, pharms., West Palm Beach, Fla.—Selling and refilling prescriptions for sulfonamides, hormones, antibiotics, and barbiturates without physicians' authorizations. Chastain and Lumpkin both placed on probation for 1 year; case against firm to be set for trial at a future date.

Edward H. Ranch, t/a Ranch's Drug Store, Jack R. Penberthy and William R. Plank, pharms., West Palm Beach, Fla.—Selling and refilling prescriptions for steroids, barbiturates, and hormones. Penberthy and Plank both place on probation for 1 year; case against firm to be set for trial at a future date.

Goodman Drug & Liquor, Inc., Morton S. Elboom, pharm., Chicago, Ill.—Selling amphetamine and hormones without physicians' prescriptions. Firm fined $750 plus $41.20 costs; Elboom fined $300.

John Byron Miller, t/a J. B. Miller, Pharmacist, Williamstown, Ky.—Selling antibiotics, cortisone, and other prescription drugs without physicians' prescriptions. Fined $2,250 and sentenced to 90 days in jail.

Millard C. Owens, t/a M. C. Owens Druggist, Covington, Ky.—Selling amphetamine without physicians' prescriptions. Fined $1,500 and sentenced to 90 days in jail.

Cleveland Circle Pharmacy, Inc., Abraham B. Margolis, Pres., Israel Abend, pharm., Boston, Mass.—Refilling prescriptions for hormones, sulfonamides, barbiturates, and amphetamine without physicians' authorizations. Firm fined $500; Margolis fined $300, 6-months jail sentence suspended and placed on probation for 1 year; Abend fined $200 and placed on probation for 1 year.

John Colluccini, t/a Grant Drug Co., East Boston, Mass.—Selling and refilling prescriptions for barbiturates, tranquilizers, hormones, sulfonamides, and prescription sedatives without physicians' authorizations. Fined $250 and placed on probation for 1 year.

Setzer Pharmacy, George F. Setzer and Robert J. Setzer, pharms., St. Paul, Minn.—Refilling barbiturates and amphetamine prescriptions without physicians' authorizations. George and Robert Setzer each fined $25.

Fred Rathgeber, t/a Fred's Pharmacy, Clarence Meany, pharm., Omaha, Nebr.—Selling barbiturates without physicians' prescriptions. Jury returned a verdict of not guilty.

Misbranded and Substandard Drugs

Norton Chemical Company, Inc., t/a Norton Products Company, Los Angeles, Calif.—Turpentine was labeled as castor oil; hydrogen peroxide was adulterated with isopropyl alcohol. Fined $1,500.

Benylin Expectorant

A petition filed as (supplement to a new drug application which would exempt drugs such as Benylin Expectorant containing diphenhydramine hydrochloride (Benadryl) from prescription dispensing requirements) has been withdrawn by the petitioner. It has been concluded that preparations containing diphenhydramine hydrochloride could not be considered as safe for over-the-counter sale without a prescription, because a number of physicians have commented that adverse effects are produced, particularly drowsiness, by the drug.

Retention of Drug Records

The following records must now be retained for a period of at least 2 years:

1. Written agreement containing specifications as will insure that unlabeled drugs or devices introduced into interstate commerce will not be adulterated or misbranded upon completion of processing, labeling, or repacking.
2. Complete records of disposal of all coal tar color from each batch covered by an FDA certificate.
3. Statement by expert that drugs distributed and imported for investigational use will be used with proper facilities by or under him for investigation, as well as complete records of shipments and deliveries.
4. Records of shipments and deliveries kept by insulin distributors to whom certifications have been issued by the FDA.

Complete records of shipments and deliveries must be kept by antibiotic and antibiotic-containing drug distributors to whom certifications have been issued by the FDA for a period of at least 3 years.

[*Federal Register* **23,** 3177 (May 13, 1958)]

FTC ACTIONS

Detergen Co.—Earle G. Hastings and Earle G. Hastings, Jr., trading as the above company, at 1316 East 36th Place, Tulsa, Okla., have been prohibited from representing their product "Deturge" as effective treatment for colitis and other unhealthy conditions of the gastrointestinal tract. The consent order, FTC approved, also requires the respondents to stop claiming that "many diseases and disorders originate in the gastrointestinal tract or result from faulty elimination or constipation"; that "faulty elimination or constipation result in toxic accumulations in the tract"; and that "abnormal accumulations in the tract poison the body or retard assimilation of essential minerals."

Fluidless Contact Lenses, Inc.—This company of 11 West 42nd St., New York City, has denied FTC charges of misrepresenting the effectiveness and wearing comfort of its "Airflo" contact lenses and recommendations for them. The company declares that it is true that these lenses are not irritating, can be worn all day without discomfort, protect the eyes more than eyeglasses and are unbreakable and are a revolutionary new type. The company admits that these lenses are not usually fitted without discomfort and do not correct the vision better than eyeglasses in many cases. But it says it has never claimed otherwise.

Helene Curtis Industries, Inc.—The Federal Trade Commission has approved a consent order prohibiting this firm from representing that "Enden Shampoo" will cure dandruff, also that it will have any lasting effect on dandruff except during regular use.

OTHER ACTIONS

Upjohn—In a substitution lawsuit brought against the Pelham Pharmacy of New York City by the Upjohn Co., the latter was awarded $5,000 for attorney's fees incurred by Upjohn in connection with the lawsuit and also court costs and profits proven to have been made by substitution for Upjohn products. The total sum to be paid by the defendant will be substantial. Evidence was introduced during the trial to show that on a number of occasions the defendant substituted when prescriptions were presented for Cheracol, Cortef, and Zymacap.

The Upjohn Control Division has developed specific tests for detecting imitations of its products. As a result it is now aware of numerous other instances of such unfair competition and has developed an extensive program to curb it.

Members

The Association Extends a Cordial Welcome to the Following Men and Women Who Were Accepted for Active Membership During the Month Preceeding Preparation of This Issue.

ARIZONA
Reich, Samuel J., Phoenix

CALIFORNIA
Chafkin, Samuel, Modesto
Cravens, James A., Van Nuys
Cuneo, Michael E., San Francisco
Dutton, Harry A., South Laguna
Harper, A. A., Stockton
Hoffman, Louise, San Gabriel
Hopson, Herman G., Los Angeles
Logan, J. Sydney, Norwalk
Person, Lorne V., Glendale
Reason, Ernest D., Alhambra
Rickard, Kenneth C., Sierra Madre
Rose, John H., El Cajon
Stoner, Lloyd N., Glendale
Tennyson, Louis W., Jr., Los Angeles

COLORADO
Anderson Ward V., Denver
Frazier, Francis E., Windsor
Gilbert, C. Carroll, Greeley
Leversee, Leslie V., Denver

CONNECTICUT
Caldwell, Howard E., Suffield
Levine, Wolf, Darien
Reback, Dan M., Darien

DISTRICT OF COLUMBIA
Jones, Lawrence P.

FLORIDA
Dermer, Louis, Hollywood
Fernandez, Oscar O., St. Petersburg
Frederick, Cecil L., Jr., West Palm Beach
Johnston, Rosella R., Fort Lauderdale
Roberts, L. A., Holly Hill

IDAHO
Nye, L. W., Pocatello
Stapleton, Gail, Pocatello
Streeper, Noall R., Alameda

ILLINOIS
Friesenecker, Earl M., Chicago
Hutchens, William T., Chicago
Iwanchuk, Mrs. Aza S., Chicago
Malesh, Walter, Decatur
Marty, Bernard A., Decatur

INDIANA
Hinshaw, Charles S., Elwood
Kraas, William F., Jr., Indianapolis
Nash, Clinton B., Evansville
Reeve, Frank S., South Bend
Sister Teresa Kelly, Evansville

IOWA
Eggleston, Max W., Waverly
Sheldon, Clell R., Lake City

KANSAS
Ediger, Donald D., Hutchinson
Jenkinson, Robert L., Belleville
Stamm, Willis D., Wichita

KENTUCKY
Silverman, Joseph, Harlan

LOUISIANA
Foster, Lee C., Jr., Jonesville

MASSACHUSETTS
Murrman, William J., Clinton
Van Buskirk, Damon D., Framingham

MINNESOTA
Seitz, G. W., Cottonwood

MISSISSIPPI
Ball, Sam, Fayette
McMillion, T. H., McComb
Walton, Mark H., Collins

MISSOURI
Watkins, Richard M., St. Louis

MONTANA
Wailes, John L., Missoula

NEBRASKA
Peters, Orville J., Scottsbluff

NEVADA
Rafael, Andrew J., Las Vegas

NEW HAMPSHIRE
Collins, John P., Litchfield
Dostilio, Orlando J., Keene
Reed, C. Raymond, Laconia

NEW JERSEY
Aberbach, Hyman, Irvington
Landau, Jacob N., Springfield
Magee, Forrest N., Haddonfield
Portner, Robert J., Summit

NEW MEXICO
Meierkord, Leonard A., Los Alamos
Newlander, Joel S., Albuquerque

NEW YORK
Clemente, Anthony J., Brooklyn
Cosentino, Joseph, Elmhurst
Niles, Millard J., New York City
Rahn, Erwin P. G., Brooklyn
Winship, Ward L., Warsaw

NORTH CAROLINA
Dayvault, Frank W., Lenoir
Gaddy, Carl B., Jr., Charlotte
McDowell, Norfleet O., Jr., Scotland Neck

OHIO
Lemanski, John F., Dayton
McClure, Marie A., Toledo
McCormick, J. M., Cincinnati
Spreen, Walter C., Cincinnati

PENNSYLVANIA
Comer, Morton S., Philadelphia
Coover, Glenn M., York
Edgerton, William H., Philadelphia
Harrison, Beryl L., Philadelphia
Schwait, Alan D., Philadelphia
Shetty, B. Vithal, Philadelphia
Shultz, Eugene A., Jr., Willow Grove

SOUTH CAROLINA
Botzis, P. Peter, Charleston

TENNESSEE
Bigham, Lynnice B., Nashville
Flowers, Kenneth A., Columbia
Johnson, James H., Memphis
Evans, James C., Knoxville

TEXAS
Mohrmann, John M., Gonzales
Taylor, Charles F., Perryton
Trousdale, H. G., Smithville
Wiese, Roy, Jr., Brenham

VIRGINIA
McFarlane, Raymond C., Dublin

WASHINGTON
Auld, Harold H., Seattle
Kirk, Gertrude B., Spokane
Kirschner, Natalie I., Seattle

WEST VIRGINIA
Straight, Fred S., Man

WISCONSIN
Smissman, Edward E., Madison

INTERNATIONAL
Jennison, Ellen E., Saskatoon, Sask., Canada
Levius, Harold P., Johannesburg, South Africa

Deceased

Austin, Charles S., Jr., Baltimore, Md., April 11, 1958
Gerstner, Robert R., New York City, Oct. 18, 1957
Kelley, G. Benner, Tucson, Ariz.
Keyes, Ralph E., Auburndale, Mass., May 14, 1957
Krupkin, M. A., Chicago, Ill., Sept. 1957
Pettit, Alvin T., Indianapolis, Ind.
Silkes, Charles, New York City
Sister Marie Agathe, Portsmouth, Va.
Skinner, Joe D., Birmingham, Ala. (Student)
Thebus, John A., Denver, Colo.
Williams, Frank B., Flycreek, N.Y.

Obituaries

Charles Summerfield Austin, Jr., 64, died April 11 at Union Memorial Hospital, Baltimore, after a lingering illness. A graduate of the University of Maryland School of Pharmacy, much of his career was devoted to retailing. At the time of his death he was President of the Maryland Board of Pharmacy and of the Calvert Drug Company. He was Past President of the Maryland Pharmaceutical Association, the Baltimore Metropolitan Pharmaceutical Association, and the Alumni Association of the School of Pharmacy. He held memberships in the APhA, NABP, FWDA, and NARD.

J. Edward Richardson, retail pharmacist, passed away on April 13 at his home in Detroit. He was a Past President of the Michigan Branch of the APhA, member of the Board of Directors of the Michigan Academy of Pharmacists, and a past member of the State Board of Pharmacy. He was the owner of Richardson Drugs and had been a Detroit resident for 50 years.

Coming Events

Candian Medical Assoc.—June 15–19, 91st Ann. Mtg., Halifax, N.S.

Pharm. Soc., State of N.Y.—June 15–20, Hotel Concord, Kiamesha Lake, N.Y.

American Neurological Assn.—June 16–18, Claridge Hotel, Atlantic City, N.J. (Dr. Charles Rupp, 133 S. 36th St., Philadelphia, Pa.)

Indiana Pharm. Assn.—June 16–18, 77th ann. conv. French Lick, Indiana.

American Goiter Assn.—June 17–19, St. Francis Hotel, San Francisco, Calif. (Dr. John C. McClintock, 149½ Washington Ave., Albany 10, N.Y.)

American College of Chest Physicians—June 18–22, Fairmont Hotel, San Francisco.

American Geriatrics Society—June 19–20, Mark Hopkins Hotel, San Francisco.

The Endocrine Society—June 19–21, San Francisco.

American Therapeutic Society—June 19–22, Mark Hopkins Hotel, San Francisco.

American Medical Women's Assn.—June 19–22, San Francisco.

Canadian Psychiatric Assn.—June 20–21, Ann. Mtg., Halifax, N.S.

American Rheumatism Assn.—June 20–21, San Francisco.

American Academy of Tuberculosis Physicians—June 21, San Francisco.

Society for Investigative Dermatology—June 21–22, The Clift, San Francisco.

American Diabetes Assn.—June 21–22, 18th Annual Meeting, Mark Hopkins Hotel, San Francisco.

Int. Fed. of Gynecology and Obstetrics—June 22–28, 2nd Cong., Montreal.

American Medical Association—June 23–27, 1958 Ann. mtg. San Francisco.

Int. Society of Urology—June 25–July 1, 11th Cong., Stockholm.

Medical Service Soc. of America—June 28–29, 12th ann. nat. conv., Sheraton-Cadillac Hotel, Detroit.

Continued from page 360

There is no health profession that can offer as many outlets for women's abilities as can Pharmacy. Pharmacy offers the best of vocational insurance policies for able young women. It has proved so over and over again in affording them an opportunity to make profitable use of their time and training. Whether to aid their husbands in building up a business, or to lay away added money for a home, or to fill in time while the husband meets his military obligation, there is always a position waiting for them in industrial laboratory work as well as in retail or hospital pharmacy.

We will see far more able high school girl graduates train in our programs when the truth about the attractive employment possibilities becomes better known. We should welcome their ability to our ranks.

Teaching

Our colleges are in desperate need of new teachers in the next 5 years and more ahead.[3] The needs for full-time employment at the M.S. and Ph.D. levels will be 384 teachers during this period. This is an increase of 84.4% in full-time staff. The greatest need, percentage-wise, will be in the division of hospital pharmacy, but number-wise will be in the division of Pharmacy itself, including disciplines preparing the student for industrial pharmacy. In the order of increased manpower needs, after the division of pharmacy, come teacher needs in the following order: pharmaceutical chemistry, pharmacy administration, pharmacology, pharmacognosy, and hospital pharmacy. This anticipated number of 384 teachers finds the distribution to be 99 with M.S. and 285 with Ph.D. degrees.

It is not wise to consider teaching in pharmacy as a career unless one can see his way clear to pursue graduate study to at least the M.S. degree if not the Ph.D.

In preparing for teaching it would be wise to consider at least a few courses in education, certainly psychology, tests and measurements, and methods of teaching. Such an investment will be most helpful in aiding the prospective teacher to gain some insight into good teaching methods. This would spare classes from serving as helpless guinea pigs while a graduate assistant learns to be a teacher.

Industrial Pharmacy Needs

If one requires evidence as to the needs of industry in selecting possible vocational outlets, the material assembled by Dr. John Christian and his Committee on Graduate Programs should serve well here. This report was given at the April 1958 meeting of the AACP in Los Angeles, California. No doubt this report will be published in the very near future in the valuable columns of the *American Journal of Pharmaceutical Education*. Before this publication becomes available I have selected some of their figures to serve as encouragement to graduates whether holders of B.S., M.S. or PHD. degrees, as well as to those in training. The next 5-year needs in Quality and Analytical Control, Research and Development, and Production Manufacturing finds a demand for 428 with B.S., 76 with M.S. and 145 with Ph.D. degrees. A more detailed analysis of this excellent report will be found on page 364 in this issue of THIS JOURNAL.

Opportunities in Industry

With the opportunities afforded by a healthy pharmaceutical industry with its vast growth potential, we have present for both industry and individual, a most attractive future. Our graduates will play an ever-increasing part in this industry just as soon as we in education can turn out a larger number of well-trained men and women. It is the responsibility of our schools to recruit and interest qualified candidates for industrial pharmacy.

Further evidence as to the need for pharmacists in this industry is contained in the excellent article entitled "The Demand for Pharmacy-Trained Ph.D's in Industry."[1] Nearly 80% of persons now engaged in industrial pharmaceutical research are men trained in Pharmacy. This number will become greater as the supply becomes more plentiful, with at least double the number required in the next few years. While presently there is a large percentage of B.S. trainees employed, the better the training the greater the opportunities.

The Control Laboratory is a vital part of pharmaceutical research. The newer analyses require the understanding and the utilization of specialized instruments. As is characteristic of any analytical laboratory, here we must see that raw material to finished products are subjected to potency and purity tests, etc.

The tremendous advances in the kinds of drugs today has required new methods of analysis and new instrumentation. No doubt added precision with present and newer instruments of analysis will demand added training in quantitative methods. A good course in instrumentation is recommended.

In facing preparation for the pharmaceutical industry, we obtain from our course work understanding of the general principles of solutions, phase equilibrium and solubility, colloidal phenomena, the application of physico-chemical principles to heat transfer, and emulsification, as well as kinetic studies of product deterioration. Our analytical controls should lead to constant improvement and development of new methods of drug analysis.

Some of the newer techniques employed involve ultraviolet and infrared spectrophotometry, fluorospectrophotometry, newer flame and arc spectrophotometric procedures, crystallography, polarography and chromatography, as well as radioactive tracer techniques—to mention but a few.

Training in Pharmaceutical Development is concerned with scaling up laboratory amounts to production size quantities and the development, of appropriate manufacturing processes.

The success of the manufacturer depends on the ability of our trainees to discover new drugs and to improve older compounds. Pharmaceutical products from their inception to the time they appear on the market as prescription items are never far from a laboratory. Such opportunities serve as a challenge to our graduates.

We must train our students so that they are able to contribute to the accomplishment of the industrial team through their creative thinking—there can be no progress in modern research without it. Since approximately 5% of the sales dollar is being spent on research by pharmaceutical concerns, this means that they invest more heavily by about 2% in this work than do the chemical industries.

Every successful person, businessman, or scientist tries to keep abreast of his field, but he is always on the lookout for men or women who can take on added responsibilities and who can make decisions. These people must be capable of sound judgment, and possess unquestioned integrity, a cooperative spirit and loyalty as well. They must have a sound scientific background to be sure, but when you move up in the pharmaceutical industry you find that you are dealing more with people than you are with scientific theories. Here no member of an industrial team can isolate himself from his co-workers and serve them or the company well.

Our graduate's diploma is a certificate of the "commencement" of opportunities presented to those qualified by virtue of breadth of background, sound training in fundamentals, and the desire to keep on learning. Few professions offer a greater challenge to the best of our high school graduates than training for Pharmacy. Whether the vocation within our profession is industry, teaching, retail or hospital pharmacy, or other outlets, there is a great shortage of well-qualified trainees. Those of us in teaching welcome inquiry and offer guidance in the selection of a vocation within Pharmacy. ■

when they won't take time to eat what they should...

"THE BOHEMIANS" BY GERRY GERSTEN

...eventually they'll wind up feeling less than healthy. And many of them will be coming to you . . . for the nutritional support needed to put their diets back in order.

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Vitamin B_{12}	2 mcg.
Calcium Pantothenate	10 mg.
Ascorbic Acid	150 mg.
Desiccated Liver, N. F.	300 mg.
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As a dietary supplement: **1 or 2 tablets daily**
In convalescence: **2 or more tablets daily**

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605113

Prescription Practice

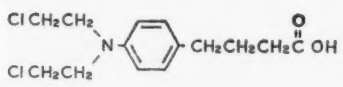
New and Nonofficial Drugs

by Samuel W. Goldstein

Items Recently Evaluated by the American Medical Association Council on Drugs.

Chlorambucil

Leukeran (B. W. & Co.); 4-{*p*-[Bis(2-chloroethyl)amino]-phenyl}butyric acid.



Actions and Uses. Chlorambucil, a nitrogen mustard derivative, has actions and uses similar to those of mechlorethamine HCl (HN_2) and triethylene melamine. The drug is effective by the oral route and is more completely absorbed from the gastrointestinal tract than is triethylene melamine. After the administration of large doses to experimental animals, chlorambucil produces cytotoxic effects that are typical of the nitrogen mustards. In clinical employment, however, its pharmacological effects are restricted primarily to hematopoietic tissue. Although the drug is by no means completely selective in its action, it does depress lymphocytic proliferation and maturation to a much greater extent than that of the granulocytic elements. Side-effects, such as anorexia, nausea, and vomiting, which almost always complicate therapy with mechlorethamine and frequently appear with triethylene melamine also, occur only rarely with chlorambucil.

Chlorambucil is useful for the palliative treatment of chronic lymphocytic leukemia, lymphosarcoma, and Hodgkin's disease. Although there is little evidence that the drug appreciably increases survival time of patients with any of these diseases, it produces remissions of variable duration in a sizable proportion of patients. The drug is more effective if used in the generalized, but not terminal, stages of these diseases; radiation therapy is generally considered preferable for the initial treatment of early or localized lesions. However, chlorambucil is capable of inducing remissions in some patients who are refractory to radiation, and it may also be used effectively when the neoplastic involvement is too widespread to be amenable to radiation therapy.

As with all other chemotherapeutic agents, each course of therapy with chlorambucil is likely to be less effective than the preceding one. Remissions due to chlorambucil are characterized by relief of pain and pruritus, partial and temporary regression of soft-tissue lesions and enlarged lymph nodes, reduction in hepatomegaly and splenomegaly, lessening of existing anemia, weight gain, and general feeling of well-being. In patients with chronic lymphocytic leukemia, marked hematological improvement may occur in conjunction with clinical remissions. Thus the drug produces a rapid reduction in total leukocyte count, acting primarily on the lymphocytic elements. Although there is no evidence that chlorambucil exerts a greater antineoplastic effect than any other cytotoxic drug, the fact that it is absorbed in a more predictable manner, produces fewer side-effects, and may be less damaging to the bone marrow makes it somewhat easier to handle than either mechlorethamine hydrochloride or triethylene melamine. Hence, from the point of view of patient tolerance and ease of management, chlorambucil appears to compare favorably with other chemotherapeutic agents.

It is still too early to determine the possible usefulness of chlorambucil in mycosis fungoides or bronchogenic carcinoma. The drug apparently is of no value in chronic granulocytic leukemia or in any type of acute leukemia.

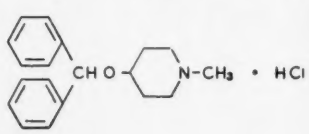
Apart from occasional instances of gastric distress, the clinical toxicity of chlorambucil is related entirely to bone marrow depression. Depending on dosage and duration of therapy, lymphpenia, neutropenia, and thrombocytopenia may appear in that order of occurrence. Unless dosage is reduced or the drug discontinued, irreversible damage to the bone marrow may result. Hence, it is imperative that the hematological status of the patient be carefully followed during treatment. Complete blood examinations, including erythrocyte count, hemoglobin level, and total and differential leukocyte counts, are mandatory at least once a week, preferably more often. Thrombocyte estimations are also indicated at regular intervals or at the first sign of abnormal bleeding tendencies.

Although it is not necessary to discontinue therapy at the first evidence of a fall in the neutrophil count, it should be remembered that the fall may continue for 10 days after the last dose and that, as the total dose approaches 6.5 mg. per Kg. of body weight, there is real danger of causing irreversible bone marrow damage. Chlorambucil should not be given to patients with severe leukopenia, thrombocytopenia, or anemia due either to direct invasion of bone marrow by tumor cells or to previous therapy with depressant drugs or ionizing radiation.

Dosage. Chlorambucil is administered orally. For the initiation of therapy in patients with Hodgkin's disease, the usual dose is 0.2 mg. per Kg. of body weight daily for three to six weeks as required. Patients with lymphosarcoma or chronic lymphocytic leukemia usually require about 0.1 mg. per Kg. of body weight per day for a similar period of time. It should be emphasized that the foregoing dosages are only approximate averages and that dosage for each particular patient should be individualized according to clinical and hematological response. If a remission is obtained, many authorities favor discontinuation of all medication until relapse occurs. However, if maintenance therapy during remission is considered advisable, the dosage for this purpose should not exceed 0.1 mg. per Kg. of body weight each day and may well be as low as 0.03 mg. per Kg. of body weight daily.

Diphenylpyraline Hydrochloride

Diafen (SchenLabs); 4-Diphenylmethoxy-1-methylpiperidine HCl.



Actions and Uses. Diphenylpyraline HCl, a potent antihistaminic compound, is related chemically and pharmacologically to diphenhydramine. Although clinical experience with the drug is limited, it appears to be satisfactory for the treatment of allergic and hypersensitivity reactions usually considered amenable to therapy with histamine-antagonizing agents. The incidence of side effects to diphenylpyraline hydrochloride is low; drowsiness, dryness of the mouth, headache, and dizziness are encountered occasionally.

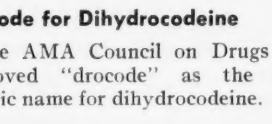
Dosage. Diphenylpyraline HCl is administered orally. The usual dose for adults is 2 mg. every four hours. Dosage for children is reduced according to age.

Drocode for Dihydrocodeine

The AMA Council on Drugs has approved "drocode" as the new generic name for dihydrocodeine.

Hexetidine

Sterisil (Warner-Chilcott); 5-Amino-1,3-bis(β-ethylhexyl)-5-methyl hexahydropyrimidine.



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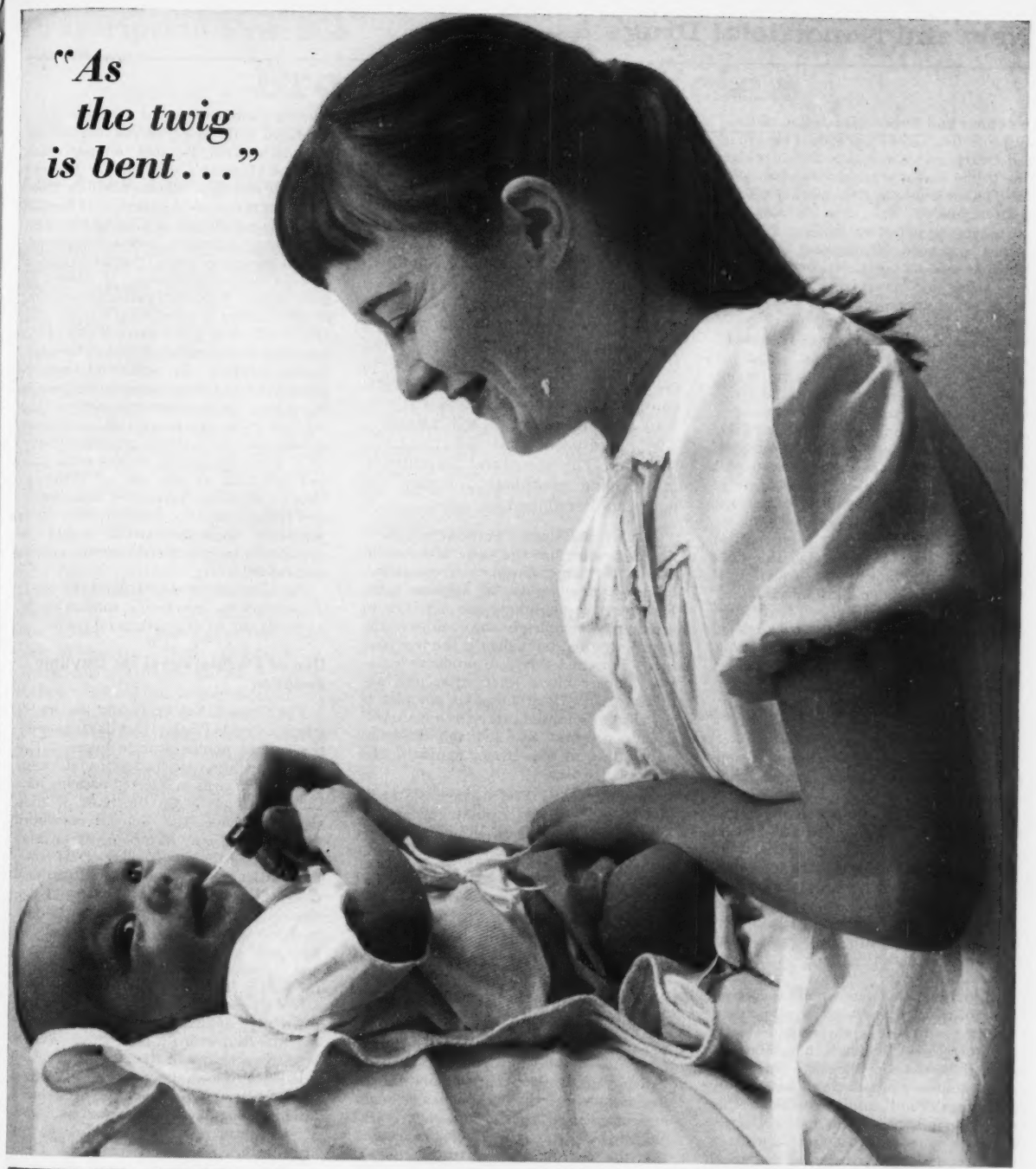

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- Readily miscible with food and formula
- No refrigeration required
- Delightful new honey-lemon flavor

DOSAGE: *Infants and Children* — 0.6 cc. daily or as directed by a physician. Zymadrops may be administered by dropping directly on the tongue or mixing with water, milk, fruit juice, or any other foods.

SUPPLIED: In 15, 30 and 60 cc. bottles.

*TRADEMARK, REG. U. S. PAT. OFF. — PEDIATRIC MULTIVITAMINS, UPJOHN

Upjohn THE UPJOHN COMPANY KALAMAZOO, MICHIGAN

 Continued from page 378

Actions and Uses. Hexetidine, a local anti-infective agent, is proposed for use in the treatment of vaginitis and cervicitis due to the fungal organism, *Candida albicans*, or the protozoan organism, *Trichomonas vaginalis*. The drug is also reported to be effective against a newly named organism, *Hemophilus vaginalis*, which is said to be the etiological agent responsible for most cases of so-called nonspecific bacterial vaginitis and leukorrhea. In laboratory susceptibility tests, hexetidine shows moderate to excellent antimicrobial activity against these organisms as well as against some gram-positive and gram-negative bacteria. However, the *in vivo* (clinical) evidence is not nearly so convincing. Although prior experience has shown that the protozoan *Trichomonas vaginalis* is readily destroyed by a variety of agents in the laboratory, there is frequently very little correlation between *in vitro* and *in vivo* activity. Thus, while the protozoan is susceptible to hexetidine in the test tube, this does not necessarily indicate an equal antimicrobial activity in clinical infections.

The drug has been used in a fairly large number of patients with trichomonal vaginitis, and, in some cases, considerable improvement has been noted. However, in view of the difficulty in enforcing strict controlled conditions and obtaining adequate follow-up observations in studies of this nature, it is not yet possible to determine the usefulness of hexetidine in comparison with other agents. Hence, additional controlled clinical studies are needed before the ultimate usefulness of hexetidine as a trichomonacide can be determined. Results of clinical trials with hexetidine in vaginal moniliasis have been somewhat more encouraging than in trichomonal infections. Some observers have reported high rates of cure after a course of therapy with this agent. Since the monilial infections are, in general, more amenable to therapy of any kind than are trichomonal infections, the significance of the reported high rates of cure in vaginal candidiasis is uncertain. On the basis of present evidence, hexetidine appears to be of about the same order of effectiveness as gentian violet but has the advantage of not staining clothing. Case reports suggest that hexetidine is clinically effective in some cases of nonspecific vaginitis or vaginitis believed due to *H. vaginalis*.

The systemic toxicity of hexetidine in experimental animals is low. Except for occasional instances of local irritation, clinical employment of the drug has not been associated with any untoward reactions or side-effects. Its sensitizing potential on the mucosa of the vagina has not been determined.

Dosage. Hexetidine is employed intravaginally as a 0.1% gel. The suggested dosage is approximately 7 cc. of the gel instilled high in the vaginal vault on each of six nights. The treatment may be repeated if necessary, and the drug may be used throughout the menstrual period. A douche may be used prior to application. Soapy solutions should not be used for douching since the drug is inactivated by soap. Hexetidine should not be used intracervically.

Tetracycline Phosphate Complex

Panmycin Phosphate (Upjohn), **Sumycin** (Squibb), **Tetrex** (Bristol). A relatively insoluble complex precipitated by the addition of a solution of sodium metaphosphate to a solution of tetracycline or its hydrochloride. The anhydrous complex contains approximately 45% carbon, 6 to 8% phosphorus, 4.8% nitrogen, 3.9% hydrogen, and 0.7 to 1.4% sodium. The structural formula of tetracycline phosphate complex has not been determined.

Actions and Uses. Tetracycline phosphate complex has the same actions and uses as the parent antibiotic, tetracycline, or its hydrochloride or calcium salts. However, the phosphate complex is more rapidly and completely absorbed from the gastrointestinal tract than is the free base or its salts and therefore produces somewhat higher blood levels after oral administration. The phosphate complex is used for the same indications as other tetracycline preparations, and the incidence and nature of side-effects appear to be identical for each.

Dosage. Tetracycline phosphate complex is administered orally, and dosage is expressed in terms of the parent drug. For adults, the usual total dose is 1 Gm. per day given in two to four divided doses. Total daily dosage for children is 25 mg. per Kg. of body weight.

SUPPLEMENTAL STATEMENTS

Parenteral Use of Novobiocin Sodium

The Council has evaluated the parenteral use of the antibiotic, novobiocin (Albamycin, Cathomycin) sodium, for injection by either the intravenous or intramuscular route. On the basis of currently available evidence, the Council concluded that the parenteral administration of this agent is justified as a temporary measure for the treatment of severe infections in those patients who are unable to take the drug by mouth. The indications for parenteral therapy with novobiocin sodium are the same as those for the oral form of the drug. (See the monograph on novobiocin sodium in THE JOURNAL, Feb. 23, 1957, page 646.)

By either parenteral route, the usual dosage for adults is 500 mg. every 12 hours; for children, 15 mg. per kilogram of body weight every day in two divided doses at intervals of 12 hours. For intravenous administration, a concentrated solution is freshly prepared by dissolving 500 mg. of the powdered drug in 5 cc. of a suitable solubilizing agent. This solution is diluted with 30 cc. of isotonic sodium chloride solution, lactated potassic saline injection (Darrow's solution), or Ringer's injection and then administered by slow, direct, intravenous injection. At least 5 to 10 minutes should be allowed for direct intravenous injection, since too rapid administration may cause venous irritation or even thrombophlebitis. If parenteral fluid therapy is also indicated, the concentrated solution of novobiocin sodium may also be added to 1 to 3 liters of any of the foregoing fluids and administered by intravenous infusion. In occasional cases in which neither oral nor intravenous therapy is possible, the concentrated solution (100 mg. per cubic centimeter) of novobiocin sodium may be injected intramuscularly. This, however, usually causes some pain and irritation at the site of injection. Hence, whenever parenteral administration is necessary, the intravenous route is preferred. Oral medication should be substituted for parenteral therapy as soon as possible.

The Council voted to expand the NND monograph on novobiocin sodium to describe its use by the parenteral route.

Use of Ethchlorvynol for Daytime Sedation

The Council has evaluated the use of ethchlorvynol (Placidyl) for daytime sedation. This nonbarbiturate hypnotic has previously been described as useful for the induction of sleep in selected patients with simple insomnia. On the basis of additional evidence, the Council concluded that the drug may also be given in small doses during the day to allay or calm certain patients with organic or functional disorders characterized by anxiety or tension. Its clinical employment for this purpose has been confined largely to patients with mild anxiety neuroses, hypertension, and various skin diseases. It has also been used on a limited scale in patients with asthma, peptic ulcer, and cardiac disorders. Currently available evidence indicates that the drug exerts a mild sedative effect in such patients and that the incidence of side-effects is low (about 8%). Side-effects so far encountered include drowsiness, fatigue, hang-over, ataxia, vertigo, headache, nightmares, mental confusion, bad after-taste, nausea, and vomiting. There has been no observed tendency toward development of psychic dependence or habituation. Pending the accumulation of more clinical information, however, this possibility should be kept in mind, particularly when the drug is used over prolonged periods of time.

Dosage of ethchlorvynol for use as a daytime sedative should be individualized according to the response of the particular patient. Oral dosage usually ranges from 100 mg. twice daily to 200 mg. three times a day. If the drug appears to be rapidly absorbed, producing transient giddiness or ataxia, these side-effects will be minimized if the medication is given with a glass of milk or other light refreshment.

Prescription Practice

Progress in Medicine

Acute Aspirin Action on Plasma Steroids

In view of reports of aspirin therapy in conditions reacting to adrenocortical steroids a study of the acute effects of aspirin ingestion in high therapeutic doses on the plasma concentration of corticoids and on the urinary excretion of neutral 17-ketosteroids and corticosteroids was made by R. F. Herndon, *et al.*, and reported in *A MA Arch. Internal Med.*, **101**, 623(Mar. 1958). The investigators noted that the diurnal variation and response to corticotropin (ACTH) of free plasma reducing steroids in patients with rheumatoid arthritis was similar to that of healthy persons. Aspirin produced an acute decrease of approximately 40% in the total level of plasma corticoids, mainly at the expense of the phenylhydrazine-reacting steroids. This influence was most marked four hours after the initial dose of aspirin. Some reduction in plasma corticoid levels persisted during 48 hours of aspirin administration to healthy subjects. An i.v. infusion of 30 units of corticotropin in 500 cc. of 5% dextrose in water resulted in a mean increase in free plasma reducing steroids to 228% of the initial value in the normal adult and to 195% in the group of rheumatoid arthritics. The plasma corticoid response to corticotropin was diminished by the ingestion of aspirin in both the normal patients and those with rheumatoid arthritis. Aspirin increased the urinary excretion of free reducing corticosteroids during six hours of corticotropin infusion and decreased the excretion of 17-ketosteroids. However, aspirin alone over a 48-hour period increased the urinary excretion of neutral 17-ketosteroids and both free and conjugated corticosteroids. It is noted: "If salicylates promote cortisone excretion as these experiments suggest, then the duration of the effects produced by cortisone may be reduced by the concurrent use of salicylates."

Antibiotic Combinations

The antibacterial action of plasma after ingestion of novobiocin or penicillin G or a combination of both has been studied by Drs. W. F. Jones, Jr., and M. Finland, with A. Najarian and C. Wilcox, *New Engl. J. Med.*, **257,** 1268(Dec. 26, 1957). They assayed the plasmas of 6 normal men obtained after ingestion of 1 Gm. of novobiocin, penicillin, and both in equal parts. The test strains of 4 organisms varied in their susceptibility to the two antibiotics *in vitro* and included a micrococcus that was highly resistant to penicillin. Based on comparative plasma levels, the dose of equal parts of novobiocin and penicillin (0.5 Gm. each) yielded antibacterial activity that was intermediate between that produced by each of the individual antibiotics. There was no evidence of any synergistic action of these 2 antibiotics against any of the strains used. However, there was a suggestion of some reduced activity of novobiocin by penicillin against a micrococcus that was highly resistant to penicillin. Plasma binding of novobiocin was an important feature of the test employed but did not affect the major findings or the deductions made from them. The investigators consider it unwise to use novobiocin with penicillin in the treatment of infections caused by penicillin-resistant micrococci.

Cautious use of new antibiotic combinations is advocated in editorials in *Lancet*, **2,** 1207 (Dec. 14, 1957), and *Brit. Med. J.*, **5058,** 1418 (Dec. 14, 1957). Stressing the *in vivo* findings of Jones and Finland, *New Engl. J. Med.*, **257,** 481, 536, 744(1957), particularly relating to combinations including erythromycin, oleandomycin, and spiramycin, along with tetracycline, other reports substantiating their views against promiscuous use of antibiotic combinations are cited. It is noted (*Lancet*) that "Meanwhile, we should seek to exercise restraint in the use of all antibiotics, and particular care to conserve erythromycin for treatment of life-endangering staphylococcal infections acquired in hospital and thus liable to be resistant to the common antibiotics. If weak erythromycin-like drugs are to be unwisely adopted, we may rely for a time on novobiocin and vancomycin; but how long can the production of genuinely new antibiotics keep us ahead in the downhill race?"

Buthalitone Sodium Anesthesia

The results of a comparative clinical trial of the thiobarbiturate, buthalitone sodium, the sodium salt of 5-allyl-5-(methylpropyl)-thiobarbituric acid, indicate that as an anesthetic agent for outpatient use it is less desirable for this purpose than is thiopentone (thiopental) sodium; according to a report by P. H. Simmons and M. S. Blanshard, *Brit. Med. J.*, **5057,** 1347(Dec. 7, 1957). Results with rectal administration to children were so unfavorable that this phase of the trial was stopped after a limited series. The investigators noted that injected (i,v.) buthalitone sodium did not permit a more rapid rate of recovery, and that hiccup was a frequent and troublesome sequel to induction. They prefer the present available techniques and anesthetic agents.

Chlorpromazine Jaundice

A review of 65 cases of jaundice investigated during 12 months showed that in 7 the jaundice was due to chlorpromazine, according to a report by G. S. Graham, *Brit. Med. J.*, **5053,** 1080(Nov. 9, 1957). He states that 5 of the 7 cases were seen in a general hospital, and in 2 cases the condition was not suspected before laparotomy. The jaundice is believed to be of an obstructive type due to a cholangiolitic hepatitis and that it is a manifestation of a drug sensitivity. Graham suggests that chlorpromazine jaundice may be more common than is generally appreciated and that without a full history it may be treated as a surgical jaundice.

Contact Dermatitis Due to Thermofax Copy Paper

Two cases of contact dermatitis following the use of Thermofax copy paper are reported by Drs. J. Hasegawa, F. Levit, and S. M. Bluefarb, *J. Am. Med. Assoc.*, **166,** 1173(Mar. 5, 1958). The allergenic material in the paper is reported to be a tertiary butyl catechol compound. This material cannot be considered to be a primary chemical irritant, since patients with other forms of dermatitis failed to show a reaction to patch testing with the paper.

Dithiazanine as Anthelmintic

Clinical results of therapy with dithiazanine, a blue, slightly water-soluble compound, chemically 3-ethyl-2-[5-(3-ethyl - 2 - benzothiazolinylidene) - 1,3-pentadienyl] benzothiazolium iodide, in cases of helminthic infestation, are reported by J. C. Swartzwelder, *et al.*, *J. Am. Med. Assoc.*, **165,** 2063(Dec. 21, 1957). Dithiazanine was given orally in 100-mg. enteric coated tablets and, in a few cases, as a cherry-flavored suspension containing 20 mg. per ml. Trichuriasis in 164 patients treated with 200 mg. three times daily for 5 days showed 97% cures. Ascariasis in 42 patients treated with up to 600 mg. daily in divided doses showed a 97% reduction in the egg-count of the patients and 28 of them showed complete elimination of the infection. Strongyloidiasis was eliminated in 16 out of a

Continued on page 382

group of 18 patients treated for 5 to 21 days sufficed for cure in all cases. Hookworm infection was found present in 39 of the preceding groups of patients being treated for other helminthiases; the treatment incidentally caused reductions of the hookworm egg counts. Similar reduction was observed in a separate group of 8 patients with hookworm, but better results were obtained by giving subcurative doses of tetrachloroethylene with the dithiazanine. The side-effects of the drug were minimal, and its usefulness for the mass therapy of trichuriasis was demonstrated.

Dithiazanine in Strongyloidiasis and Whipworm

The anthelmintic dithiazanine (3,3′-diethylthiadicarbocyanine iodide) eliminated strongyloidiasis in 89% of 18 patients on oral treatment with 200 mg. three times daily for 21 days, according to a report by J. C. Swartzwelder, *et al.*, *AMA Arch. Internal Med.*, **101,** 658-(Mar. 1958). Side reactions were infrequent, mild, and evanescent. Whipworm infestation was completely eliminated in most patients by a five-day course of dithiazanine, according to W. W. Frye, *et al.*, *Am. J. Trop. Med.*, **6,** 890(1957). Adults received 200 mg. orally three times a day; patients weighing less than 90 lb. received 300 mg. daily.

Metabolism of Fe^{59}-Dextran Complex

A report on the metabolism of an iron-dextran complex (Imferon), in which radioactive Fe^{59} replaced ordinary Fe, is given by A. J. Grimes and M. S. R. Hutt, *Brit. Med. J.*, **5053,** 1074(Nov. 9, 1957). They note that after i.v. injection the complex was cleared from the plasma by the reticuloendothelial system, and the iron was then utilized for hemoglobin synthesis. In iron-deficient patients there appeared to be 100% utilization of the injected dose. After i.m. injection approximately 60% of the injected dose was rapidly absorbed; thereafter clearance occurred only slowly.

Opioids and Their Antagonists

In a report on synthetic narcotic analgetics and their antagonists, M. J. Schiffrin and M. S. Sadove, *GP*, **17,** 106 (Feb. 1958), state that "the number of synthetic morphine-like compounds has grown so large that the term 'opioid' has been coined to describe them as a class of pharmacologic agents. By definition an opioid is a synthetic narcotic analgetic." These compounds include meperidine or pethidine (Demerol), methadone (Adanon, Dolophine), alphaprodine (Nisentil), and levorphanol (Levo-Dromoran). The authors discuss the wide differences in the pharmacologic characteristics of the compounds, and they point out that these properties permit choice of the most suited analgetics for specific clinical pain problems. Specific antagonists for morphine and levorphanol are the allyl derivatives of these compounds. It is noted that "morphine need not be adapted for all situations, for in each specific situation, one of the opioids is superior."

Prescriptions for Fluorides

None of the procedures for individual administration of fluoride supplements completely duplicates the situation which exists when the entire community water supply contains fluoride at the optimum level. It is not certain, therefore, that a child will receive as much benefit through conscientious use of prescribed fluoride as through residence in a community where a fluoridation program is in operation. These statements are made in a report by the ADA Council on Dental Therapeutics, *J. Am. Dental Assoc.*, **56,** 589(April 1958). The Council notes that certain potential hazards may attend the individual use of fluoride supplements and states its opinion that the following principles should be observed: "1. Concentrated fluoride preparations should be dispensed only on prescription in order that adequate supervision may be provided for their safe and effective use. 2. Supplementary fluorides should be prescribed only when the concentration of fluoride ion in the drinking water is known and is less than 0.7 part per million (ppm.). 3. Dietary fluoride should be continuously available throughout the period of tooth formation. 4. No more than 264 mg. of sodium fluoride should be dispensed at one time. 5. Concentrated fluoride preparations should bear the warning statement: 'CAUTION: Store out of reach of children.' 6. Prescriptions should be limited to those instances where the parent may be expected to follow directions carefully."

The Council states: "Fluoride tablets may be employed with least difficulty in localities where the drinking water is substantially devoid of fluoride." The following prescription illustrates their use:

℞ Sodium fluoride tablets 2.2 mg.
Dispense 100

Label: Use according to written directions

CAUTION: Store out of reach of children.

Written directions should be provided according to the age of the child as follows:

1. Before 2 years of age. Add 1 fluoride tablet to each quart of water used for drinking purposes and for the preparation of formulas and other food.
2. From 2 to 3 years of age. *Every other day* add one fluoride tablet to an amount of fruit juice or drinking water which the child will consume at one time.
3. After 3 years of age. Administer one tablet *each* day in an amount of fruit juice or drinking water that will be consumed at one time.

Prescriptions of fluoride solutions may be used more conveniently in a locality where the drinking water contains a known significant level of fluoride but less than 0.7 ppm. The prescription below which specifies 0.132 Gm. of sodium fluoride is written for use when the drinking water is devoid of fluoride. However, the amount of fluoride may be adjusted downward by 10% for each 0.1 ppm. of fluoride ion in the drinking water. Thus when the level in the drinking water is 0.6 ppm., the amount of fluoride in the prescription will be reduced by 60%, that is, to 0.053 Gm. Similarly at a level of 0.4 ppm. the amount of sodium fluoride would be 0.079 Gm. and at a level of 0.2 ppm., the prescription would specify 0.106 Gm.

℞ Sodium fluoride 0 132
Distilled water to make 240 0

Label: Use according to written directions

CAUTION: Store out of reach of children.

Written directions should be provided according to the age of the child as follows:

1. Before 2 years of age. Add 1 teaspoonful to each quart of water used for drinking purposes and for the preparation of formulas and other food.
2. From 2 to 3 years of age. *Every other day* add one teaspoonful to an amount of fruit juice or water that the child will consume at one time.
3. After 3 years of age. Each day add one teaspoonful to an amount of fruit juice or water that the child will consume at one time.

. . . When the drinking water is substantially devoid of fluoride, the aim is

to provide supplements of about 0.5 mg. of fluoride ion per day for children from 2 to 3 years of age and about 1.0 mg. per day beyond 3 years of age."

Psychotherapeutic Drugs

Based upon semantic equivalence of the terms "tranquilization," "ataraxia." and "peace of mind," the AMA Council on Drugs has decided to bring order into the chaotic multiplicity of psychotherapeutic drugs and terms, such as tranquilizer, ataraxic, normalizer, calmative, neurosedative, psychic energizer, pacific, anticonfusion, and antihallucinatory. It has done so in *J. Am. Med. Assoc.*, **166,** 1040 (March 1, 1958), by abandoning the NND section on ataraxics in favor of describing agents proposed for use for their particular effects on the central nervous system, in accordance with their fundamental pharmacological classification. "On the basis of present knowledge, the drugs in this general category can be classified under the following headings:

I. Antihistamines
  A. Psychotherapeutic antihistamines
    a. Hydroxyzine (Atarax) hydrochloride
II. Central Nervous System Depressants
  A. Nonselective Depressants
    1. Analgesics
    2. General anesthetics
    3. Hypnotics and sedatives
  B. Selective Depressants
    1. Anticonvulsants
    2. Antihistamines (as above)
    3. Antitussives
    4. Central muscle relaxants (skeletal muscle relaxants), nonsedative
      a. Mephenesin (Avosyl, Dioloxol, Kinavosyl, Lissephen, Mephenesin, Mepherol, Mephson, Myoten, Myoxane, Oranixon, Prolax, Saserol, Sinan, Spasmolyn, Tolansin, Tolosate, Toloxyn, Tolserol, Tolulox, Tolyspaz)
      b. Mephenesin carbamate (Tolseram)
    5. Central muscle relaxants (skeletal muscle relaxants), sedative
      a. Meprobamate (Equanil, Miltown)
      b. Phenaglycodol (Ultran)
      c. Promoxolane (Dimethylane)
    6. Central parasympathetic suppressants
      a. Benactyzine (Suavitil) hydrochloride
    7. Central sympathetic suppressants, phenothiazine derivatives
      a. Chlorpromazine (Thorazine) hydrochloride
      b. Mepazine (Pacatal hydrochloride
      c. Perphenazine (Trilafon) hydrochloride
      d. Prochlorperazine (Compazine) maleate
      e. Promazine (Sparine) hydrochloride
      f. Triflupromazine (Vesprin) hydrochloride
    8. Central sympathetic suppressants, rauwolfia derivatives
      a. Alseroxylon (Rauwiloid)
      b. Deserpidine (Harmonyl)
      c. Rauwolfia (Raudixin, Rauserpa)
      d. Rescinnamine (Moderil)
      e. Reserpine (Rauloydin, Raurine, Resperine, Reserpoid, Roxinoid, Sandril, Serpasil, Serpiloid)
III. Central Nervous System Stimulants
  a. Methylphenidate (Ritalin) hydrochloride
  b. Pipradrol (Meratran) hydrochloride
IV. Miscellaneous Agents
  a. Azacyclonol (Frenquel) hydrochloride."

Sulfamethoxypyridazine in Urinary-Tract Infections

Clinical results noted in 48 patients treated with sulfamethoxypyridazine (Kynex) for urinary-tract infections during an average period of 35.5 days are reported by Drs. H. G. Grieble and G. G. Jackson, *New Engl. J. Med.*, **258,** 1(Jan. 2, 1958). Antibacterial concentrations of free sulfonamide were maintained in the serum and urine with a single oral dose of 0.5 Gm. daily for prolonged periods. Adverse reactions were observed in 6.4% of patients during the first course of treatment. A favorable clinical response was observed in 80% of patients with acute infections and 24% with chronic infections. Bacteriologic cure was achieved in 21% of the group. The antibacterial effect was comparable to the results achieved with standard doses of other sulfonamides. *Escherichia coli* was the most responsive whereas the results with other species were, in general, poor. Susceptible bacterial strains were eradicated after one or two weeks of treatment or not at all. The nature of the bacterial infection and the therapeutic results were significantly influenced by certain host factors. The low proportion of patients cured of urinary-tract infections is not unusual. Mixed bacterial cultures and superinfections during and immediately after treatment were the principal cause for the failure.

Tolbutamide Action and Insulin

The role of insulin in acute hypoglycemic action of tolbutamide was studied in an attempt to establish the mode of action of the hypoglycemic sulfonylureas. The results reported by Dr. J. A. Weaver, *et al.*, *Brit. Med. J.*, **5068,** 425(Feb. 22, 1958), support the view that the hypoglycemic action of tolbutamide is not produced by increasing the effective level of insulin. Ten patients with diabetes mellitus of recent onset, not controlled by diet or previously treated with insulin, were each given a single dose of 3 Gm. of tolbutamide orally. Eight of the 10 patients showed a significant fall in the venous glucose concentration. Studies on the difference between the arterial (A.) and venous (V.) glucose concentrations, expressed as A.–V./A., have shown no evidence of an increase in the uptake of glucose by the peripheral tissues in patients given tolbutamide. Studies of insulin-like activity of serum, as assayed by the rat hemi-diaphragm method, have shown that there is no change in the insulin-like activity in the patients' serum before and after tolbutamide administration. The rate of disappearance of intravenously administered insulin I^{131} from plasma was studied in normal rabbits by the electrophoretic technique. No difference in the rate of disappearance of insulin I^{131} was found following the injection intravenously of tolbutamide as compared with untreated animals.

Virus in Infant Diarrhea

The first report on epidemic diarrhea among hospitalized infants in which a virus isolatable by laboratory methods was the cause appears in *J. Am. Med. Assoc.*, **166,** 1563(Mar. 29, 1958). Dr. H. F. Eichenwald, *et al.* note that no definite viral agent had ever been isolated in diarrheal diseases before their identification of ECHO virus type 18 in two outbreaks at New York Hospital. Twelve of 21 infants in the premature nursery became ill and a study failed to show any noninfectious or bacterial cause. Four days after the end of the first outbreak a second occurred in a sick infant ward where 5 babies became ill. ECHO 18 was isolated from every infant with diarrhea but not from those remaining well. The virus was found among infants in the premature nursery only during the course of the outbreak. The second outbreak occurred after a nurse, later known to be infected during the first outbreak, attended infants in the second ward.

New Prescription Products

Cosa-Signemycin Capsules

Description: Each 250-mg. green and white capsule contains 83 mg. oleandomycin (as triacetyloleandomycin) and 167 mg. glucosamine-potentiated tetracycline (Cosa-Tetracyn). Each 125-mg. green and white capsule contains 41.7 mg. and 83.3 mg., respectively, of the two drugs.

Indications: For bacterial infections where susceptibility testing is difficult or impractical. Tetracycline side effects may occur, and an occasional cutaneous allergy to oleandomycin has been reported.

Administration: 250 mg. 4 times daily; children, proportionately less.

Form Supplied: Capsules, 250-mg. in bottles of 16 and 100; 125-mg. in bottles of 25 and 100.

Source: Pfizer Laboratories, Brooklyn 6, N.Y.

Cosa-Terramycin Capsules
Cosa-Terramycin for Oral Susp.

Description: Each yellow capsule contains 125 mg. or 250 mg. oxytetracycline with glucosamine. Each bottle contains 1.5 Gm. oxytetracycline with glucosamine in a dry, peach-flavored mixture. Addition of water to 2 oz. makes a suspension containing 125 mg. per 5-cc. teaspoonful.

Indications: When oxytetracycline therapy is useful.

Administration: 250 mg. in either form 4 times daily; less for children depending on age and weight.

Form Supplied: Capsules, 125-mg. in bottles of 25 and 100; 250-mg. in bottles of 16 and 100. For suspension, 2-oz. bottles.

Source: Pfizer Laboratories, Brooklyn 6, N.Y. See pages 170, 171.

Cosa-Tetracyn Capsules
Cosa-Tetracyn for Oral Susp.

Description: Each capsule contains 125 mg. or 250 mg. of the drug. Each bottle contains glucosamine-potentiated tetracycline, 1.5 Gm., in a dry, orange-flavored mixture. Addition of water to 2 fl. oz. makes a suspension containing 125 mg. per 5-cc. teaspoonful.

Indications: When tetracycline therapy is useful.

Administration: Two teaspoonfuls (250 mg.) 4 times daily; children, 1 teaspoonful (125 mg.) daily per 10–15 lb. of body weight in divided doses.

Form Supplied: For suspension, 2-oz bottles. Cosa-Tetracyn capsules are available: 125-mg. in bottles of 25 and 100; 250-mg. in bottles of 16 and 100.

Source: Pfizer Laboratories, Brooklyn 6, N.Y.

Deaner Tablets

Description: Each scored tablet contains 25 mg. 2-dimethylaminoethanol as the *p*-acetamidobenzoic acid salt. The generic name is deanol.

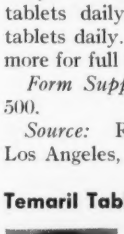
Indications: For conditions benefited by a mild stimulant, including: neurasthenia and chronic fatigue states, mild depressions, and chronic headache. Use in psychomotor and petit mal epilepsy still being studied. Contraindicated in grand mal epilepsy and in mixed epilepsy with grand mal component.

Administration: Initially, 1 tablet daily in the morning; maintenance, 1–3 tablets daily, and for children 0.5–3 tablets daily. May require 2 weeks or more for full therapeutic benefit.

Form Supplied: Bottles of 100 and 500.

Source: Riker Laboratories, Inc., Los Angeles, Calif.

Temaril Tablets



Description: Each tablet contains 2.5 mg. trimeprazine [chemically *dl*-10-(3-dimethylamino-2-methylpropyl)-phenothiazine] as the tartrate.

Indications: For treatment of pruritis associated with dermatologic conditions, and for itching in chickenpox, measles, polycythemia, Hodgkin's disease, leukemia, obstructive jaundice, and diabetic pruritis.

Administration: One tablet twice daily after meals plus 2 tablets at bedtime; children 6 to 12 years, 1 tablet at bedtime and, if daytime therapy is required, 1 or 2 tablets daily after meals.

Form Supplied: Bottles of 50.

Source: Smith, Kline & French Labs., Philadelphia 1, Pa. See page 191.

Other New Products

Chemicals, clinical trial drugs, diagnostic aids, equipment for the retail and hospital pharmacy.

Amgesic Tablets

Green sugar-coated tablets containing in each: N-acetyl-*p*-aminophenol, 160 mg.; chlorpheniramine maleate, 2 mg.; noscapine, 2 mg.; Levsin (*l*-hyoscyamine sulfate), 0.0625 mg.; aspirin, 230 mg.; and caffeine, 15 mg., are marketed by *Kremers-Urban Co.* for prophylactic and symptomatic treatment of colds. Dosage, 2 tablets at first sign of a cold, then 1 every 4 hours. Do not exceed 4 tablets in any 24-hr. period. Children, 6–12 yrs., half dose; under 6 yrs., according to weight. Supplied in bottles of 25 and 100.

Amperone Tablets

Orange scored tablets containing, in each: dienestrol, 0.5 mg.; methyltestosterone, 2.5 mg.; pentobarbital sodium, 30 mg.; and *d*-amphetamine sulfate, 5 mg., are marketed by *Kremers-Urban Co.* for relief of menopausal and postmenopausal symptoms complicated by anxiety and tension, and for stimulation of bone formation in postmenopausal osteoporosis. Not to be used in patients with a history of malignancy. Dosage, 1 tablet daily 15 minutes before breakfast; in severe cases a second tablet may be taken after lunch, then reduce to 1 a day as patient improves. Supplied in bottles of 60.

Azotrex Syrup

A syrup containing in each 5-cc. teaspoonful: tetracycline phosphate complex (Tetrex), equivalent to 125 mg. tetracycline, and sulfamethizole, 250 mg., is marketed by *Bristol Labs.* for oral treatment of urinary tract infections. Supplied in 4-oz. bottles. See pages 261, 332.

Deca-, Poly-, and Tri-Vi-Sol Tablets

Mead Johnson has marketed its Deca-Vi-Sol, Poly-Vi-Sol, and Tri-Vi-Sol vitamin combinations in fruit-flavored soluble tablet form. All are supplied in bottles of 24 and 100 tablets. The Liquid drop forms also are available.

All actively promoted items on which information has been received in the past thirty days are reported here. Manufacturers are urged to send details of their new products as early as possible, so that pharmacists through these pages will have full information before products are detailed to the physician. For inclusion in this department, for which there is no charge, send descriptive literature to the Editor, New Prescription Products Department, JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, 2215 Constitution Avenue, N.W., Washington 7, D.C.

Delta-Cortef Suspension (Vet.)

The *Upjohn Co.* has marketed for veterinary use an aqueous suspension for i.m. injection only and containing, in each cc.: prednisolone (delta-1-hydrocortisone), 10 mg.; with sodium citrate, 4.5 mg.; PEG 4000, 120 mg.; PVP, 1 mg.; and preserved with myristyl-gamma-picolinium chloride, 0.2 mg., and neomycin sulfate, 5 mg. It is intended for use in large and small animals in conditions requiring glucocorticoid anti-inflammatory and/or supportive effect. Dosage schedules accompany the package with a 10-cc. vial of suspension.

Dihydrostreptomycin Sulfate Inj.

A clear, colorless, stabilized, sterile solution containing 500 mg. dihydrostreptomycin base (as sulfate) per cc. is marketed by *Philadelphia Ampoule Labs.* for i.m. injection. Supplied in 10-cc. multiple-dose vials.

Dramamine Liquid

G. D. Searle & Co. has marketed a 3-oz. bottle size for the liquid form of its antinauseant Dramamine (dimenhydrinate).

Duotrate Plateau Caps

Marion Labs. has marketed sustained release capsules of pentaerythritol tetranitrate as: Duotrate Plateau Caps (black and white, 30 mg.); Duotrate 45 Plateau Caps (black and blue, 45 mg.); Duotrate w/phenobarbital Plateau Caps (black and green, 30 mg. with 45 mg. phenobarbital). Dosage of all forms is 1 tablet twice daily before morning and evening meals. All forms are supplied in bottles of 60, 500, and 1,000 capsules.

Emdee Margarine

An over-the-counter food product containing in each 100 Gm.: linoleic acid, 34 Gm., other unsaturated fatty acids, 18 Gm. (from nonhydrogenated corn oil), and meeting other identity standards for margarine, is marketed by *Pitman-Moore* through pharmacy wholesale and retail channels. It is claimed that the product will not elevate blood cholesterol levels. Supplied in 1-lb. cans.

Enzactin Spray
Enzactin Powder Pack

Ayerst Labs. has marketed Enzactin (triacetin, glyceryl triacetate) as a propellant spray (3-av. oz. containers) and as a powder in a moisture-absorbent base (1.5-oz. puffer packages). Also available is the cream (1-oz. tubes). All forms are for treatment of athlete's foot and other superficial fungus infections.

Fedrazil Tablets

Sugar-coated tablets, each containing, 30 mg. Sudafed (pseudoephedrine HCl) and 25 mg. Perazil (chlorcyclizine HCl), are marketed by *Burroughs Wellcome & Co.* for use as a nasal decongestant and bronchodilator with antihistaminic action in acute coryza, rhinitis, aero-otitis media, sinusitis, hay fever, acute eustachian salpingitis, asthma, and serous otitis media with eustachian tube congestion. Dosage, adults and children over 8 yrs., 1–2 tablets 3 times daily; children 2–8 yrs., 1 daily. Supplied in bottles of 100.

Fergon Compound Liquid

A flavored nonalcoholic liquid containing, in each teaspoonful (5 cc.): Fergon (ferrous gluconate), 250 mg.; cobalamin, 10 mcg.; thiamine HCl, 5 mg.; riboflavin phosphate, 2 mg.; pyridoxine HCl, 1 mg.; nicotinamide, 10 mg.; and panthenol, 0.94 mg., is marketed by *Winthrop Laboratories* as a dietary supplement and hematinic agent. It is not recommended for the treatment of pernicious anemia. Dosage: as dietary supplement, 5 cc. daily. As hematinic, 5 or 10 cc. 3 times daily with water; children, 5 cc. 2 or 3 times daily. Supplied in pint bottles.

Fleet Enema, Disposable, Pediatric

C. B. Fleet Co. has marketed its enema solution (16 Gm. $NaHPO_4$ and 6 Gm. Na_2HPO_4 in 100 cc.) in disposable units containing 2.25 fl. oz. (0.5 the adult size) for pediatric use. Supplied in single units. See pages 69, 197, 3rd June cover.

Florotic for Suspension

E. R. Squibb & Sons has marketed Florotic powder (a combination of fludrocortisone, neomycin, polymyxin B, and nystatin) in a package with 5 cc. aqueous glycerin diluent and dropper for use in otic conditions where secondary bacterial infection exists or where fungal superinfection is possible.

Formatone Elixir

A liquid containing, in each 5-cc. teaspoonful: vitamin B_1, 12.5 mg.; B_{12}, 10 mcg.; and B_6, 1 mg., in a sherry wine vehicle containing sorbitol and 15% alcohol, is marketed by *Ives-Cameron Co.* for use as an appetite stimulant and nutritional supplement. Dosage, 1 teaspoonful 3 times daily before meals. Supplied in 16-oz. bottles.

Furadex Tablets (Vet.)

Blue-green oval tablets containing, in each, 50 mg. Furacin (nitrofurazone) and dextrose, are marketed by *Eaton Labs.* for use as a peroral enteric antibacterial agent in bacterial and nonspecific diarrheas in dogs. Dosage, 1–2 mg. nitrofurazone per lb. of body weight, every 8–12 hrs. for 3–5 days. Supplied in bottles of 100 tablets.

Furoxone Liquid

An orange-mint suspension containing 50 mg. Furoxone (furazolidone) in each 15 cc., with kaolin and pectin, is marketed by *Eaton Laboratories* as a bactericidal agent against enteric bacteria including common pathogenic species and strains of Escherichia, Salmonella, and Staphylococcus, and strains resistant to antibiotics and sulfonamides. Mild sensitization (rash), nausea, headache, or emesis may occur. Dosage, 2 tablespoonfuls (100 mg.); children, 5 yrs., or older, 1 tablespoonful; 1 to 4 yrs., 1.5–2 teaspoonfuls; under 1 yr., 0.5–1 teaspoonful; 4 times daily in all cases. Supplied in 240-cc. bottles.

Gantrisin Cream Package

Roche Labs. has marketed its vaginal cream containing 10% Gantricin (sulfisoxazole)(pH about 4.6) in a package containing a 3-oz. tube of cream and 18 disposable applicators. It is indicated in treatment of vaginal and cervical infections.

Intracaine Ointment

An ointment containing, in each Gm.: 50 mg. β-diethylaminoethyl *p*-ethoxybenzoate in Plastibase, is marketed by *Philadelphia Ampoule Labs.* for use as a topical anesthetic. Supplied in 1-oz. tubes.

Lectal-MRT Syrup

A flavored syrup containing in each teaspoonful (5 cc.): sodium lactate, 1.5 Gm.; potassium lactate, 70 mg.; calcium lactate, 40 mg.; magnesium lactate, 33 mg.; and dextrose 83 mg., is marketed by *Marvin R. Thompson, Inc.* The syrup containing isotonic amounts of the electrolytes is indicated in disturbed acid-base equilibrium and electrolyte balance, and in the management of gastrointestinal disturbances and acidosis, sequellae, and ulcers. Dosage, 1 teaspoonful 1 to 10 times daily, preferably with milk or cream, for 1 week or more. Supplied in pint and gallon bottles.

Lixoil Liquid

A liquid blend of sulfonated fatty oils and one or more esters of higher fatty acids is marketed by *Lixoil Labs.* for prevention of occupational oil folliculitis and solvent dermatitis. It is rubbed into the soiled skin only once daily. Supplied in pint bottles.

Lofenalac Powder

An infant formula powder containing, as its protein component, a special casein hydrolysate from which most of the phenylalanine has been removed in order to control phenylketonuria, which can cause retardation in children, is

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marketed by *Mead Johnson*. Phenylketonuria results from a congenital inability to properly metabolize phenylalanine; but a minimum amount of the amino acid is necessary for bodily function, and dietary management of phenylketonuria should be closely supervised by a physician. Lofenalac is miscible with water and is supplied in 2.5-lb. cans.

Margelate-MRT Suspension

A carminatively flavored, pink, thixotropic suspensoid containing aluminum hydroxide and magnesium aluminum silicate, with 0.5 Gm. magnesium trisilicate per 5-cc. teaspoonful is marketed by *Marvin R. Thompson, Inc.* for use as an antacid with greater acid inactivating capacity than Margel-MRT (above combination without mag. trisilicate). Dosage, 1 to 4 teaspoonfuls after meals and at bedtime with or without water, milk, or cream. Supplied in pint and gallon bottles and to hospitals only in 6-oz. bottles.

Margelectal-MRT Suspension

A carminatively flavored, nile green, thixotropic suspensoid of aluminum hydroxide and magnesium aluminum silicate gels, with 0.5 Gm. magnesium trisilicate, extract equivalent to 25 mg. belladonna leaf, with 50% Lectal-MRT syrup (sod. lactate, 0.75 Gm.; pot. lactate, 35 mg.; calc. lactate, 20 mg.; mag. lactate, 16.5 mg.; dextrose, 41.5 mg.) in each 5 cc., is marketed by *Marvin R. Thompson, Inc.*, for use in management of duodenal and gastric ulcer, relief of hyperacidity, pyloric and ileocecal spasticity and protracted subclinical electrolyte imbalance. Dosage, 1–4 teaspoonfuls after meals and at bedtime with or without fluid. After 3 or 4 weeks, return to regular diet and reduce dosage. Supplied in pint and gallon bottles and to hospitals only in 6–oz. bottles.

Medrol Tablets 2 mg.

The *Upjohn Co.* has marketed Medrol (6-methyl-delta-1-hydrocortisone) in 2 mg. tablets for more exact dosage adjustment of the anti-inflammatory steroid.

Meti-Derm Cream and Oint.—New Tubes

Schering Corp. has made available Meti-Derm cream (0.5% prednisolone) and Meti-Derm ointment (0.5%) with neomycin (0.5%) in 25-Gm. tubes in addition to the 10-Gm. tubes.

Meprospan Capsules

Capsules containing, in each, 200 mg. meprobamate (Miltown) in a prolonged release form (coated pellets), which permits release of the drug during 10 to 12 hrs., are marketed by *Wallace Laboratories* for use in conditions where meprobamate tablets can be used. The capsules are claimed to enable lower dosage with reduced possibility of side effects. Dosage, 2 capsules every 12 hrs. Supplied in bottles of 30 yellow-and-white capsules.

Mol-Iron Prenatal Tablets

Vitamin-mineral tablets, with the iron present as a ferrous sulfate-molybdenum oxide combination, are marketed by *White Laboratories* for use as a nutritional supplement for pregnancy and lactation. Supplied in bottles of 30 and 90 tablets.

Mucotin Tablets

Mucotin tablets, marketed for use in the management of hyperacidity, peptic ulcer, and gastritis, are now distributed by *Nepera Laboratories*.

Myconef Ointment

An ointment containing Spectrocin (neomycin-gramicidin), nystatin, and fludrocortisone, in Plastibase is marketed by *E. R. Squibb & Sons* for use as an antibacterial, antifungal, and anti-inflammatory dermatologic agent. Supplied in 15-Gm. tubes.

Nekatussin Lozenge

Chocolate lozenges containing, in each: noscapine, $1/8$ gr.; phenylephrine.HCl, $1/30$ gr.; pyrilamine maleate, $1/30$ gr.; ascorbic acid, 50 mg.; menthol, 0.1 gr.; saccharin, 0.1 gr.; with D-sorbitol, are marketed by *Bruce Parenterals* for use in the management of coughs. Contraindicated where respiratory secretions or exudate might be harmful. Dosage, 1–2 lozenges dissolved in the mouth 3–4 times daily; children, 0.5–1 lozenge 2–3 times daily. Supplied in bottles of 50 and 500.

Neo-Band Spray Bandage

An aerosol spray containing, in each Gm. of solids in solution, neomycin sulfate 5 mg. (0.5%) is marketed by *Rowell Labs.* The sprayed material forms a transparent film containing the antibiotic. Supplied in 6-oz. aerosol dispenser.

Noscaphen Tablets

Mint-flavored, scored tablets containing, in each: noscapine, $1/25$ gr.; acetophenetidin, 2.5 gr.; salicylamide, 3 gr.; caffeine, 0.5 gr.; pyrilamine maleate, $1/30$ gr.; and ascorbic acid, 50 mg., are marketed by *Bruce Parenterals* for symptomatic treatment of coughs due to colds. Dosage, 1–2 tablets 3 times daily; half-dose for children. Supplied in bottles of 100 and 1,000.

Ol-Vitum M Capsules

Ives-Cameron Co. has marketed polyvitamin-mineral capsules for use as a nutritional supplement for preventive and therapeutic administration. Dosage, 1 capsule daily; children under 6, as directed by physician. Supplied in bottles of 100.

Os-Quin Tablets

Salmon-colored tablets containing, in each: oyster shell (40% Ca), 202 mg.; iron (as $FeSO_4$), 39 mg.; vitamin A, 1,000 u.; D, 400 u.; and C, 25 mg., are marketed by *Marion Labs.*, for use in prenatal nutrition. Dosage, 1 tablet twice daily. Supplied in bottles of 300.

Pediagesic Emulsion

A lime or orange flavored liquid containing, in each teaspoonful: acetaminophen, 60 mg., and salicylamide, 60 mg., is marketed by *Columbus Pharmacal Co.* for use in the treatment of pain, fever, colds, and headaches in infants and children. Dosage: infants $1/2$ teaspoonful; children 1–4 yrs., $1/2$ to 1; 4–6 yrs., 1 to 2; over 6 yrs., 2 teaspoonfuls (in all groups, given every 4 to 6 hrs.). Supplied in 3-oz. bottles.

Pediatric Pen-Vee for Suspension

A powder which is dissolved in water to make 2-oz. of a flavored suspension containing, in each 5 cc.: 250 mg. (400,000 u.) penicillin V (as benzathine salt) with sodium citrate buffer and sodium benzoate 0.5%, propylparaben 0.014%, and methylparaben 0.12% as preservatives, is marketed by *Wyeth Laboratories* for use alone or in conjunction with parenteral penicillin. Dosage, in pneumococcal infections and streptococcal pneumonia, 375 mg. (600,000 u.) initially, then 250 mg. every 6–8 hrs.; in hemolytic strep. infections, 250 mg. every 8 hrs.; in acute gonorrheal vulvovaginitis or conjunctivitis, 375 mg. repeated in 6–8 hrs.; in susceptible staph. infections (bacteremia absent), 250 mg. every 6–8 hrs. Supplied as powder in 2-oz. bottles.

Pocket-tainer Vials

Polyethylene vials for capsules are available with store name or note from *Chase Mfg. Co.* in 4, 8, and 12-dr. sizes.

pHan Tablets

Banana-flavored antacid-adsorbent tablets, each containing 450 mg. aluminum hydroxide-glycine and 60 mg. magnesium oxide, are marketed by *Sandoz Pharmaceuticals*. Dosage, 1–2 tablets every 2 hrs. Supplied in bottles of 100.

Poly-Opal Ointment Jars

Lermer Plastics, Inc., has marketed chemically inert polyethylene opal ointment and cream jars with black screw caps. Sizes available are: 0.5, 1, 2, 3, and 4 oz.

Prantal Cream Non-R

The cream containing 2% diphenmethanil methylsulfate, and used in the management of poison ivy, oak, and sumac, and to control excessive sweating and itching, has been marketed by *Schering Corp.* for over-the-counter sale.

Premarin w/Meprobamate Tablets

Ayerst has marketed tablets containing, in each: Premarin, 400 mg., and meprobamate, 200 mg. The tablets are designated as PMB-200. Already available is the PMB-400 tablet containing 400 mg. meprobamate. Both forms are supplied in bottles of 60 and 500.

Prolaire and Prolaire-B Tablets

The *Stuart Co.* has changed the name of their tablets containing butabarbital, *d*-amphetamine sulfate, aspirin, salicylamide, and acetaminophen, from Prolar to Prolaire. Their tablets containing the same formula plus belladonna alkaloids are now called Prolaire-B instead of Prolar-B.

Pyribenzamine Compound w/Privine

A nasal spray containing Pyribenzamine (tripelennamine) HCl 0.25% and Privine (naphazoline) HCl 0.025% in aqueous solution is marketed by *Ciba Pharmaceutical Products*. Dosage, 1 or 2 applications to each nostril. Supplied in 15-cc. plastic nebulizers.

Pyridium Tri-Sulfa Tablets

Tablets containing, in each: Pyridium (phenylazodiaminopyridine HCl), 150 mg., and 167 mg. each of sulfadiazine, sulfamerazine, and sulfamethazine, are marketed by *Warner-Chilcott Labs.* as a urinary antibacterial-analgesic combination. Contraindicated in chronic glomerulonephritis, especially when accompanied by low phthalein output; pyelonephritis of pregnancy with gastrointestinal disturbance; severe hepatitis where excretion is low; and uremia. Dosage, 1 tablet 4 times daily. Supplied in bottles of 30. See pages 201, 271.

RG Lecithin Wafers

The *Glidden Co.* has marketed wafers containing lecithin and soy protein: 3 wafers supplying choline, 145 mg.; inositol, 145 mg.; and phosphorus (as Ca phosphate), 130 mg. (17% MDR), as a dietary food supplement. Supplied in boxes of 60 wafers. RG Lecithin granules also are available.

Rolief Lotion

A lotion containing zirconium oxide, diperidon (Diothane), cetylpyridinium chloride (Ceepryn), parabens, and menthol is marketed by *Wm. S. Merrell Co.* for relief of pain and itching caused by poison ivy, poison oak, sumac, nonpoisonous insect bites, and other minor skin irritations. Applied directly from the 1-oz. roll-on bottle.

Safety Cap Bottles

Owens-Illinois Glass Co. manufactures special polyethylene cap closures for bottles containing medicinals that should be kept from children. The closure, which fits tightly enough to make removal by small children difficult, is being used on bottles of St. Joseph Aspirin for children by *Plough, Inc.*

Solu-Cortef 250 mg. Mix-O-Vial

The *Upjohn Co.* has marketed a 2-cc. Mix-O-Vial containing 250 mg. hydrocortisone (as the sodium succinate) buffered with NaH_2PO_4 and Na_2HPO_4, with 1.8 cc. water for injection preserved with methylparaben 0.13% and propylparaben 0.015%. The 100-mg. vial also is available.

Migral Tablets

Sugar-coated tablets containing, in each: ergotamine tartrate, 1 mg.; Marezine (cyclizine HCl), 25 mg.; and caffeine 50 mg., are marketed by *B. W. & Co. (U.S.A.) Inc.* for use in the treatment of migraine and other vascular headaches. Cyclizine HCl is included to eliminate the nausea and vomiting due to ergotamine or to the migraine. Dosage, 2–3 tablets at first warning of an attack, then 1 or 2 tablets every half hour, as required; not more than 6 tablets should be taken for any single attack. Supplied in bottles of 20 and 100.

Synatan Forte Tabule

Tablets containing, in each 26.25 mg. tanphetamin (*d*-amphetamine tannate), a protocolloid complex, are marketed by *Irwin, Neisler & Co.* Their Synatan Tabule contains 17.5 mg. per tablet.

Sudafed Syrup

A red syrup containing, in each 5-cc. teaspoonful, 30 mg. of pseudophedrine HCl is marketed by *Burroughs Wellcome & Co.* for oral use as a nasal decongestant. Dosage, 2 teaspoonfuls 3 or 5 times daily; children 4 months to 6 yrs., one-half dose; infants up to 3 months, one-quarter dose. Supplied in pint bottles.

Syringes—Disposable

A line of sterile disposable syringes, in sizes 1-cc., 2-cc., 5-cc., 10-cc., and 20-cc., and 40–80 units, and 17 sizes of needles, are supplied by *Admiral Corp.*

Trilafon Syrup

Schering Corp. has marketed its antinauseant tranquilizer Trilafon (perphenazine) in a syrup containing 2 mg. in each 5 cc. (teaspoonful). It is particularly intended for use to control conditions of mental agitation in children and elderly patients. Dosage, children 1–6 yrs., 2 mg. 2 or 3 times daily; children 6–12 yrs., 2 mg. 3 or 4 times daily; adults (same as for tablets), 2–6 mg. 3 or 4 times daily. Supplied in 4-oz. amber bottles.

Triminic Juvelets

Oral timed-release Juvelets containing, in each: phenylpropylamine HCl, 25 mg.; pyrilamine maleate, 12.5 mg.; and pheniramine maleate, 12.5 mg.; are marketed by *Smith-Dorsey* for the relief of symptoms of colds, nasal allergies, and sinusitis in patients in the 6- to 12-yr. age group. Each dose is stated to be effective for 6–8 hrs. Supplied in bottles of 50.

Tropasil Tablets

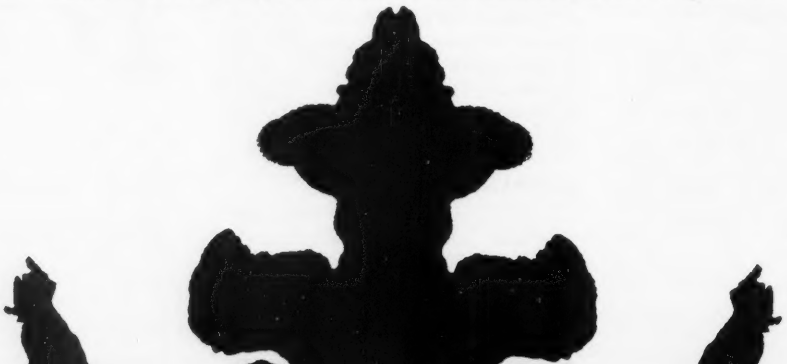
Scored, white tablets containing, in each: 200 mg. aluminum proteinate (more than 40% milk protein) and 300 mg. aluminum magnesium hydroxycarbonate, are marketed by *Crookes-Barnes Labs.* for use in treating gastric hyperacidity. The flavored tablets are swallowed whole rather than sucked or chewed. Dosage, 1–2 tablets 1–2 hrs. following meals or as required. Supplied in boxes of 100 tablets in 10 cellophane strips.

Zestamin Junior Captabs

Small oblong yellow tablets containing 11 vitamins with choline dihydrogen citrate, inositol, methionine, liver, yeast, and 8 minerals, are marketed by *Bryant Pharm. Corp.* for use as a dietary supplement for children and adolescents. Supplied in bottles of 100 and 1,000 tablets.

SQUIBB ANNOUNCES a new, improved agent for better management of psychotic patients

schizophrenia • manic states • psychoses associated with organic brain disease



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Squibb Trifluprom azine 10-(3-dimethylaminopropyl)-2-(trifluoromethyl) phenothiazine hydrochloride

In extensive clinical experience—singularly free from toxicity

- Jaundice or liver damage—not observed
- Skin eruptions—rare
- Photosensitivity—rare
- Hyperthermia—rare
- Convulsions—not observed

Dosage: Usual initial dose, 25 mg. t. i. d., to be adjusted according to patient response. See literature.

Tablets of 10, 25 and 50 mg.

Chemically improved

Modification of the phenothiazine structure potentiates beneficial properties . . . reduces unwanted effects

Pharmacologically improved

Enhanced potency with far less sedative effect

Clinically improved

Does not oversedate the patient into sleepiness, apathy, lethargy

Drug induced agitation minimal

Active and rapid in controlling manic states, excitement and panic . . .in modifying the disturbing effects of delusions and hallucinations . . . in moderating hostile behavior . . . in facilitating insight

Intractable behavior patterns brought under control . . . patients made accessible to psychotherapy . . . nursing care reduced . . . social rehabilitation hastened

Effective dosage levels may be reached without development of side effects

"VESPRIN" IS A SQUIBB TRADEMARK

SQUIBB *Squibb Quality—the Priceless Ingredient*

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